DOCUMENT RESUME

ED 022 338

EF 001 776

EDUCATION FOR PITTSBURGH.

Harvard Univ., Cambridge, Mass. Center for Field Studies.; Harvard Univ., Cambridge, Mass. Graduate School of Education.

Pub Date [66]

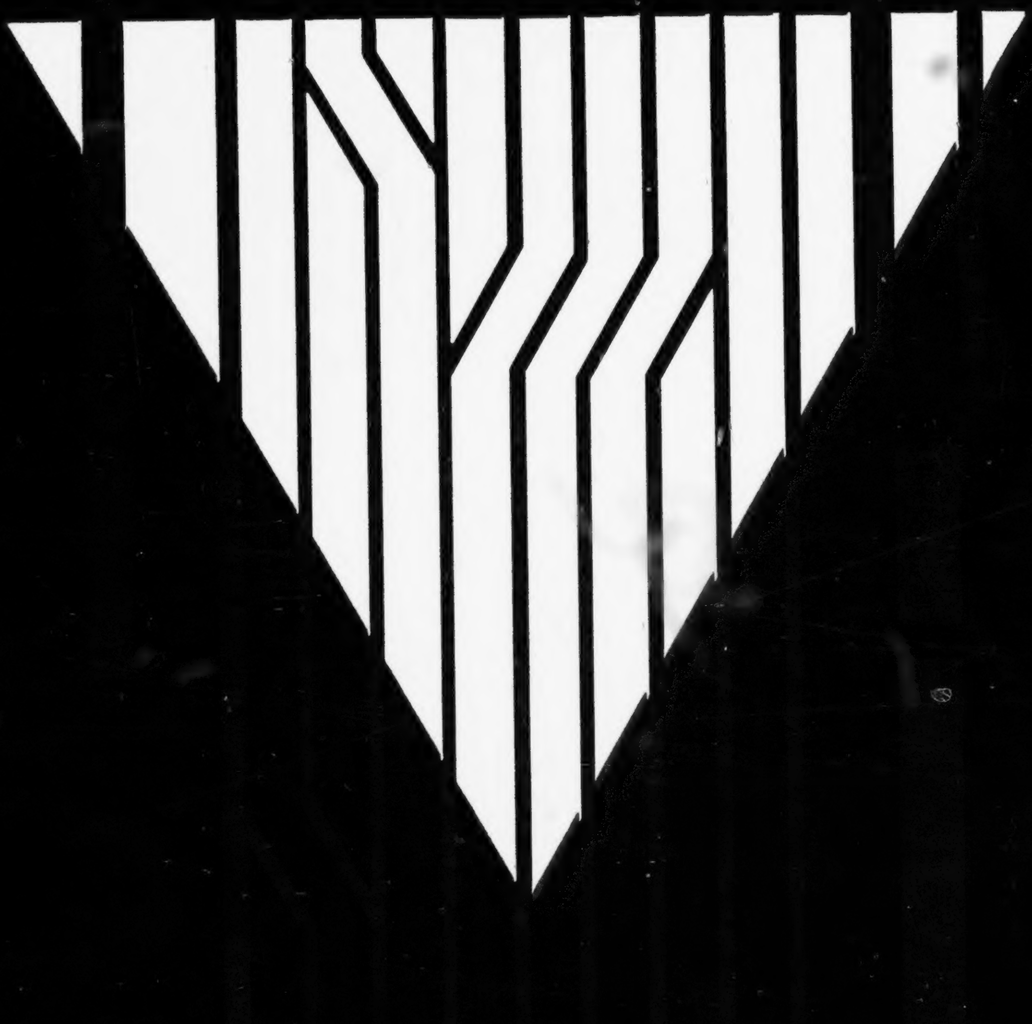
Note-60p.

EDRS Price MF-$0.50 HC-$2.48

Descriptors-DEFACTO SEGREGATION, *DEMOGRAPHY, EDUCATIONAL CHANGE, *EDUCATIONAL PLANNING, SCHOOL CONSTRUCTION, *SCHOOL INTEGRATION, *SCHOOL ORGANIZATION, *SECONDARY EDUCATION, URBAN EDUCATION

A study of, and recommendations for, long range methods to improve integration and education in Pittsburgh's public schools. Emphasis is on secondary education. The background for educational change in Pittsburgh is presented, followed by recommendations for the shape of the educational setting to come. Recommendations refer to--(1) the secondary education program, (2) construction of new secondary facilities, (3) organization of schools by grade level and attendance district, (4) elementary schools, and (5) the cost of the construction program. Tables of enrollments, diagrams of facilities, and demographic maps are included. (NI)

Education for Pittsburgh



EF 001776

Harvard Graduate School of Education

Education for Pittsburgh

Center for Field Studies

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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Harvard Graduate School of Education

Study Staff

John J. Allison, Jr.
Gordon M. Ambach
William G. Buss, Jr.
Richard Carlson
Wilmer St. Clair Cody, Jr.
Vincent F. Conroy
Joseph M. Cronin
Andre L. Daniere
L. Linton Deck, Jr.
Homer D. Fish
John G. Fitzgibbon
Ernest Fleishman
Edythe Gaines (Mrs.)
Arthur W. Gosling
Walter L. Hill
Herold C. Hunt
Howard M. Johnson
Bud B. Khleif
Niilo E. Koponen
Lawrence Lerer
William Maxwell, Jr.
Joseph J. Poli, Jr.
Bruce C. Pulsifer
Nancy H. St. John (Mrs.)
Joshua L. Smith
George B. Thomas
Susan Thomas (Mrs.)

Anne Christopher
Eunice E. Good (Mrs.)
Mary Claiborne Jarratt
Gail Pierson
Brenda Norman
Florence M. Wilkins (Mrs.)

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Library of Congress Catalog Card No. 66-28230
Printed in United States of America
Second Printing

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I: Introduction

The theme of the Pittsburgh Board of Public Education's Annual Report of 1965 was racial equality. In a policy statement contained in that report, the Board condemned racial segregation in schools and pledged itself to the elimination of de facto segregation.

> Every reasonable and constructive measure that can be afforded will be taken for the ultimate elimination of de facto segregation in our schools.[1]

Pursuant to this commitment, the Board engaged the Center for Field Studies of the Harvard Graduate School of Education to study long-range methods for improving integration and educational excellence in Pittsburgh's public schools and to make recommendations based on the study. The work of the Harvard staff in Pittsburgh was carried out as part of a project which is supported by the Ford Foundation and which has as its focus the study of school segregation and the development of legal and educational means for dealing with it.

The scope of the Harvard staff's assignment and of the present report is described in a key provision of the consulting contract:

> *Secondary School Integration Plan.* The present secondary school buildings will be examined as to their capacity, condition and location for accommodating the children and educational program in Pittsburgh. Recommendations concerning future use of existing buildings and new construction will have as a primary objective achievement of the maximum amount of racial integration consistent with attainment of other educational goals.[2]

The consulting agreement contemplated extension of the study to other than secondary schools[3] where "necessary and feasible."[4]

The emphasis on secondary schools does not reflect a judgment, by either the Pittsburgh Board of Education or the Harvard staff, that education at the upper grade levels is in any sense more important than at the elementary levels. It resulted simply from the fact that decisions concerning secondary schools were imminent for Pittsburgh, and therefore provided the necessary focus for a study which, in many respects, has been broad and open-ended. In fact, this report does include a number of observations and suggestions concerning education below the secondary school level. But special attention is given here to secondary education, with particular emphasis on grades 9 through 12. Additional study and more specific proposals concerning other grade levels will be necessary to sup-

[1] *The Quest for Racial Equality in the Pittsburgh Public Schools* (The Annual Report for 1965, Board of Public Education, Pittsburgh, Pennsylvania), p. 5.

[2] Agreement between School District of Pittsburgh and President and Fellows of Harvard College, September, 1965, p. 1.

[3] The agreement defined "secondary school" to mean "any school which contains one or more of the grades 7 through 12, but excluding any school which contains, inclusively, grades 1 through 7 or 1 through 8" (Agreement, p. 3). As the recommendations set out subsequently in Chapter III of this report propose "middle schools" for grades 5-8, "secondary" schools in the recommended plan include grades 5 through 12.

[4] Agreement, p. 1.

plement the recommendations included in the present report.

This report outlines the direction of education's future in Pittsburgh. It stresses integration—racial integration, integration of school and community, integration of some aspects of public and nonpublic schooling, and integration of some of the educational concerns of city and suburbs. It reflects the assumption that isolation stifles learning and that education will thrive when the schools enter fully into the life of the community.

In carrying out the study, the Harvard staff work was divided into several categories: demography, building evaluation, education program, districting, finance, and community. With the exception of community considerations this report contains the conclusion of the work done in each category, along with relevant data and discussion where appropriate. It cannot, of course, include the volumes of material collected or the internal reports prepared in the various categories. Certain documentary material relating to the demographic information collected has been turned over to the Pittsburgh public schools. In addition, the Harvard staff has investigated a very large number of possible school sites in Pittsburgh and has provided relevant information concerning its evaluation to the school department.

An attempt was made to interview a broad range of people representing the widely varying points of view of many of the community's public and private organizations, agencies, groups, and interests. These interviews were generally confidential in nature. While the recommendations of this report were influenced by this community study, specific references to this aspect of the study are not included.

The study necessarily began with an examination of what exists at present and what is now planned for public education in Pittsburgh, including the work that Pittsburgh has done in developing the concept of the Education Park and the large high school. Apart from the generalized discussion of existing high school building conditions in Chapter III and the more detailed evaluation of those buildings recommended to be discontinued as secondary schools in Appendix C, this report does not attempt to analyze or evaluate existing plans or conditions. Recommendations made here are not proposed in the spirit of criticizing what has been done in the past, but as goals to be adopted for the future. In fact, the recommendations contained here are generally either compatible with or extensions of programs now in effect in Pittsburgh's public schools or policy positions already adopted by the Pittsburgh Board of Education.

The Harvard staff knows full well that it is only one of the groups which have developed plans for improved education in Pittsburgh—the most important group being the present staff of Pittsburgh's school department. This report does not contain a detailed solution to educational problems in Pittsburgh. It provides broad guidelines; the details will result from the efforts of the Board of Education, the staff of the public schools, and the people of Pittsburgh. The implementation of this report will require a substantial commitment of Pittsburgh's resources. We urge that this commitment be made for the education of Pittsburgh's children and hence for the future of Pittsburgh.

II: A background for educational change in Pittsburgh

A. Context for change

As one emerges from the Fort Pitt Tunnel, a stirring view of Pittsburgh, with the Ohio, Allegheny, and Monongahela Rivers, and the Golden Triangle, lies before and below him. The Golden Triangle stands as more than a physical monument evidencing Pittsburgh's ability to transform the surface of a once drab and smoky city. It is a dramatic symbol of Pittsburgh's resolution and power to bring about stunning changes. The City Council and Mayor's Office, City Planning, Urban Renewal, the Allegheny Conference, Action Housing, and many other public and private agencies have entered into the development of the physical and social rebirth of Pittsburgh (including rehabilitation, residential and commercial renewal, and the beginning of plans for a model transportation network of superhighways and rapid transit which will facilitate travel within and beyond the city).

Pittsburgh's public schools have shared in this rebirth. The school system has upgraded the education program through a number of innovations in recent years. It has done pioneering work with a team-teaching program which has been extended to forty schools; it has begun a program to identify low-performing students who show promise for college, classes for preschool-age children, an ungraded primary school program, a "Scholars Program" for gifted students, and a coordination of academic and vocational education; and it has made a public commitment to integrated education.

But Pittsburgh has built no public secondary schools since Allderdice was constructed in 1927, thirty-nine years ago. It does not have the physical structures which allow it fully to implement necessary program reform or to realize effective integration. This report recommends a plan of education which includes construction of the necessary facilities and the changes in the secondary education program which will influence this construction.

The city of Pittsburgh is responding to change and revitalization. As the Board of Education observed in its 1965 Annual Report, "The times were never so good for the work that we have to do."[1]

B. The demographic dimension

An important ingredient in any long-range view of education is the estimated size and composition of the population which will be served by the public schools. Predictions of future school enrollments are based in large measure on what happened in the past, and therefore, to a marked degree, their accuracy depends upon a continuation of past trends. Estimates based on extensions of the past are qualified somewhat by what is known about planned or completed changes in available housing and transportation networks and by known changes in economic or housing characteristics, such as the percentage of white-collar workers or the percentage of owner-occupied dwellings, in various census tracts. But even these qualifications rely upon past trends, for it is assumed that families will continue to have approximately the same number of children as existing families living under comparable conditions. Regardless of past trends, however, it is assumed that legal requirements will be enforced. For example, it is assumed that there will be active enforcement of city building codes concerning occupancy.

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[1] *The Quest for Racial Equality*, p. 18.

Certain factors underlying past patterns are likely to change in the years ahead. For example, the rate of migration of Negroes from the South to northern urban areas can be expected to begin to decline. There may be changes in the zoning and real estate patterns which now restrict movement of Negro families within the city and from city to suburbs. Individual racial discrimination in housing patterns may well diminish.

Because of the reliance on past occurrences and the possibility of changes, the demographic methodology, described in detail in Appendix A, should be studied and the population estimates revised at such time as significant changes occur.

Since projections of the population of Pittsburgh and its public schools must be based on trends of the past, it is important to summarize these trends briefly. Between 1950 and 1960 most sections of Pittsburgh declined in population. During this period of population decline, there was an increase in the portion of the population which included school-age children. Since 1960, however, the total public and private school enrollments in Pittsburgh have dropped slightly. This decline in enrollments reflects a nonpublic school enrollment reduction which exceeded the public school enrollment increase during that period.

From 1950 to 1960 the nonwhite portion of Pittsburgh's population increased in both proportion and total numbers.[2] Neither this growth nor the nonwhite population itself was distributed evenly throughout the city. The racial composition of school enrollments since 1960 reflects this city-wide population pattern of the decade ending in 1960. That is, the overall nonwhite percentage of public school enrollments has risen, and the children who comprise these nonwhite enrollments are distributed unevenly throughout the city. A more detailed account of the past population and school enrollment trends in Pittsburgh and in various sections of the city is presented in Appendix B and the tables and maps included there.

It is estimated that public school enrollments in Pittsburgh's secondary schools will rise in the years immediately ahead and then decline by the end of the next ten years to a level at or somewhat below 1965 levels, and that there will be an increase in the proportion of Negro enrollments.[3] Table II-1 shows current and projected school enrollments by total number and by racial composition for all public school children in grades 5-8 and 9-12, the grades most directly affected by the proposals of this report. The table gives a high estimate as well as the most probable estimate.

As Table II-1 shows, both the high and most probable estimates indicate that the total enrollments for grades 5-12 will increase during the period 1965-1970 and then will decrease to near the 1965 level by 1975. Enrollments for grades 5-8 show a slight increase between 1965 and 1970 but then drop off to well below the 1965 level by 1975. This drop in middle school enrollments reflects a reduction in the number of Pittsburgh births since 1960. Enrollments for grades 9-12 indicate a gradual increase between 1965 and 1975 but, because of the post-1960 drop in Pittsburgh births, these enrollments may decrease thereafter. What happens after 1975, however, is quite speculative and no attempt is made here to estimate public school enrollments beyond that date. Moreover, it should be mentioned that certain population estimates

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[2] Pittsburgh's nonwhite population contains ethnic groups other than Negroes, but these other groups constitute such a small proportion of the total that "nonwhite" and "Negro" are used interchangeably in this section and throughout this report where generalizations are made concerning population size, composition, or growth.

[3] These estimates do not include the increased enrollment, on a part-time basis, of nonpublic school children, which is recommended in Chapter III of this report.

TABLE II - 1

Current and Estimated Public Secondary School Enrollments* in Pittsburgh

	5-8				9-12				Total			
	White	*Negro*	*Total*	*Percentage Negro*	*White*	*Negro*	*Total*	*Percentage Negro*	*White*	*Negro*	*Total*	*Percentage Negro*
1965-66	12,680	8,706	21,386	40.7	16,094	6,288	22,382	28.1	28,774	14,994	43,768	34.3
1970-71												
High	12,848	9,764	22,612	43.2	16,005	8,532	24,537	34.8	28,853	18,296	47,149	38.8
Most Probable	12,846	9,467	22,313	42.4	15,919	8,215	24,134	34.0	28,765	17,682	46,447	38.1
1975-76												
High	10,628	8,612	19,240	44.8	16,119	9,405	25,524	36.8	26,747	18,017	44,764	40.2
Most Probable	10,575	8,300	18,875	44.0	15,980	8,857	24,837	35.7	26,555	17,157	43,712	39.3

* Enrollments for the 1965-66 school year are based upon a special school census of December, 1965. All other figures are estimates made by the Harvard staff. All figures represent resident enrollments and include both special and vocational students.

have indicated some increase in the total population of Pittsburgh after 1975. Uncertainties as to the age composition of these estimates make any assessment of its possible effect on public school enrollments speculative.

As can be seen from Table II-1, a general rise in the Negro portion of the Pittsburgh school district population is expected at both the 5-8 and 9-12 levels. It is expected that the percentage of Negro students in grades 9-12 will continue to be smaller than the percentage of Negro students in grades 5-8, partly because many white students from nonpublic schools enter the public schools at grade 9. Both the general rise in the Negro portion of the school population and the higher Negro percentage at the earlier grades are reflections of the increase in the Negro percentage of births in the city in recent years.

These estimated enrollments are of course predictions, not facts. School planners must continue to examine demographic trends in Pittsburgh and to change the estimates to keep them in line with relevant developments. What happens to the population of Pittsburgh and its schools depends much more upon what the city does and what the schools do than upon any facts now known.

C. Integrated education for Pittsburgh

A fundamental objective of education is to relate our society's tradition or heritage to present circumstances, to bring the inherited knowledge of the past to bear on the problems of the present and future. Education must arouse a sense of connection between ideas and day-to-day action; it must bring young people into meaningful relation to the adult world in which they will play a part; it must provide the power to translate the great ideals of our society into the everyday life of all Americans. In the city of Pittsburgh, education must provide the power to shape a great center of social, economic, and cultural achievement where persons of all races, creeds, and backgrounds may fully enjoy equality, liberty, and justice.

INTEGRATION OF SCHOOL AND COMMUNITY Education is not synonymous with school, nor is it exclusively for children. The school building is but one focus of the community's resources for education. For some educational purposes, it is necessary, for both children and adults. But the city has many other teaching resources for education which should be utilized also.

As a child advances in age, he must be educated to understand and to command the use of the social, economic, political, artistic, and intellectual resources and powers of his community. He must not feel isolated from the adult community, protected from, and denied opportunity for, significant action by the boundaries of his school's walls and his teenage culture. This educating process cannot be limited to talking about, or showing pictures of, the community's endeavors; it must include direct contact with the buildings, the people, the context of the community's activities. Many rural and suburban areas suffer from severe limits of community educational resources. The city, however, possesses the highly specialized and sophisticated landmarks of our society—museums, symphony halls, stadiums, galleries, corporate offices, hospitals. These facilities offer the specialized educational settings and talents that make a comprehensive educational program flourish. They must be drawn into an integrated educational program.

METROPOLITAN INTEGRATION Educational cooperation between the city and its suburbs would be a natural and logical development in Pittsburgh. The judges who appoint the Pittsburgh Board of Education sit on a bench which has jurisdiction over all of Allegheny County. In the year 1965-66, more than two hundred children from nearby suburbs attend Pittsburgh schools, principally vocational high schools, and nearly four hundred Pittsburgh children attend suburban schools. Community colleges will offer post-high school education on a county-wide basis. Yet, there is apparently little tendency in either city or suburb to create or extend intercity cooperation in elementary and secondary education.

But education is necessarily related to the varied life of the metropolitan area as well as to the life of the city. The city supplies the greatest part of the cultural life and many of the jobs available to the suburban dweller. Pittsburgh's pupils sometimes grow up to live in suburbia, and suburbia houses teachers and administrators from Pittsburgh's schools.

The proposed system of community colleges provides an important link in educational facilities between city and the surrounding metropolitan areas of Allegheny County. The Education Centers recommended in the following chapter will marshal educational facilities on a scale that a single suburban community is unable to match. And the metropolitan area and its population provide a more effective base for creating racially integrated education. Although this report does not deal extensively with metropolitan cooperation, the recommendations of this report would facilitate extension of city-suburb ventures. Pittsburgh and its surrounding communities are ready to begin more cooperative use of the educational resources of the metropolitan area and, particularly, more cooperative planning of resources for the future.

INTEGRATION OF PUBLIC AND NONPUBLIC EDUCATIONAL EXPERIENCES Like many other large cities in the United States, Pittsburgh has a large nonpublic school system. In a sense, the division of formal education between the public and nonpublic school systems is another type of segregation. It is different from racial segregation, of course, because it involves choice; a choice, for many, based on the fundamental right of religious freedom. But children in the two systems are, nonetheless, largely isolated from one another in their schools and school-related activities.

The separation of public and nonpublic school students sometimes carries curricular implications because, in many instances—although certainly not all—certain courses involving more specialized facilities or teaching are not available outside the public schools. It is possible, however, to make such courses available to children who are not enrolled in the public schools but who choose to enroll in a particular public school course or courses. As educational facilities and qualified teachers become more expensive, it can be expected that there will be a greater and greater interest in such dual enrollment for certain selected courses—particularly in mathematics, science, advanced foreign languages, the arts, and technical education. By facilitating the availability of such courses on a part-time basis, the educational opportunity of the individual students would be increased, and this in the end should redound to the benefit of Pittsburgh. These students are, of course, part of the public which the public school system was created to educate.

In developing its program under the Elementary and Secondary Education Act, Pittsburgh has included the sharing of some facilities and services by public and nonpublic school children. Moreover, for certain courses in industrial arts and home economics, the Pittsburgh Board of Education has long provided for dual enrollment. It has taken the position that enrollment in a nonpublic school does not preclude simultaneous enrollment in the public schools for particular courses. But the offering of public school programs to nonpublic school students has thus far been on a provisional, space-available basis. And, unfortunately, it has not brought public and nonpublic school children together in the same classroom at the same time.

The forthcoming construction of new buildings in Pittsburgh and the federal financial assistance available through the Elementary and Secondary Education Act offer a golden opportunity to put the dual-enrollment program on a more effective and integrated basis. By utilizing this opportunity, the public school system of Pittsburgh can make a substantial contribution to the education of its nonpublic school students and at the same time significantly increase the diversity of the student bodies of the public schools. To achieve these goals, it is essential that dual enrollment not expand or contract according to the chance availability of space and that dual-enrollment students be assigned to classes with the full-time public school students. Of course these goals cannot be accomplished by the public schools alone; they require the active and cooperative support of personnel who represent the nonpublic schools.

An attempt has been made in this report to anticipate the numbers of nonpublic school children for whom space should be provided, but this attempt is necessarily tentative. In anticipation of the vast and expensive building program about to be launched, public and nonpublic school personnel will need to work out in detail the specific courses and numbers of students likely to be involved in dual-enrollment situations.

RACIAL INTEGRATION The Pittsburgh Board of Public Education has made a forthright commitment to promote racial integration in its schools. Commissioning the Harvard staff to develop plans which would maximize integration in Pittsburgh's public schools is part of that commitment.

Racial integration, as used here, has at least two aspects. It includes numerical integration—sometimes referred to as "racial balance"—and quality integration—a more basic and more elusive goal. Racial balance means the equalization of the racial compositions of the several schools within the school district. It cannot be defined in rigid numbers or percentages. As a minimum goal, numerical integration requires that there be a substantial portion of both Negro and white enrollments in every school at the same age level. As a maximum, it requires that there not be a substantial difference between the Negro percentage of enrollments in any school and the Negro percentage of enrollments of all schools of the same grade levels.

Quality integration in the schools begins with racial balance, but it goes much further. It entails the assimilation of disparate racial groups into one educational and urban community. It requires the equalization of facilities and services throughout the schools. It assumes significant integration of classrooms, teachers, and staff at all levels. Most of all, it involves an immense dedication to overcoming the problems of a segregated past. The Annual Report of the Board of Education listed some of the problems in Pittsburgh and the action taken by the Board to correct them. For example: "In 1937, the Board employed its first Negro teacher."[4] "By 1950, blackface minstrel shows which incorporated objectionable dialect were banned and segregation in the schools' summer swimming program was abolished."[5]

These are not phenomena which are unique to Pittsburgh, but simply symbols of the segregated legacy all school systems and all children have inherited in the United States. This legacy will continue to debilitate Negro and white children in the future unless counselors, teachers, and other staff members bring to their tasks extraordinary insight, imagination, and foresight. It will be important, too, that these staff members share with students an awareness that employment patterns of the past do not adequately define the opportunities of the present and future. In the words of the Superintendent of Pittsburgh's schools:

> We can . . . assist in desegregation, such as through our pupil assignment policy, and through strategic location of new schools. But . . . we cannot correct in our white adult generations the bigotry and indifference that has led to the teeming revolution we now confront.
>
> We, as teachers, are in the business of children, and it is with children that this revolution will ultimately find its worthy fruits. The process will be slower than we would prefer, but if we pour our energy, our budget, and our best teaching talent into this revolution, we will see the beginning of recovery in our lifetime.
>
> Equal educational opportunity is our creed as teachers . . . and for some this will be "more than equal" educational investment as we offset the damages of generations of injustice.
>
> I ask that each person in the employ of the Board of Public Education think soberly upon the part he may play as a teacher, in making ALL children in Pittsburgh whole.[6]

Quality integration benefits both the Negro student and the white student; it is the ideal for Negro and white alike.

This report focuses on Pittsburgh's secondary schools. For this reason, no specific recommendations for achieving racial integration below this level are included. But it is important to stress that integration is at least equally important at the elementary grade levels. Racial consciousness, awareness of prejudice, and the sharing of societal value judgments begin even before a child enters kindergarten. The chances of achieving quality integration are better if the process is begun before the sense of isolation and prejudice has had time to harden. Integration in the secondary schools is more likely to be quality integration if students have benefited from a racially integrated experience during their previous school years.[7]

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[4] *The Quest for Racial Equality,* p. 19.

[5] *Op. cit.,* p. 29.

[6] *Op. cit.,* p. 19.

[7] See K. B. Clark, *Prejudice and Your Child* (Boston: Beacon Press, 1952); Mary E. Goodman, *Race Relations in Young Children* (Reading, Mass.: Addison-Wesley Publishing Co., Inc., 1952); Thomas F. Pettigrew, *Profile of the Negro American* (Princeton, N. J.: D. Van Nostrand Co., Inc. 1964), pp. 118-29.

III: The recommended shape of education in Pittsburgh

The recommendations which grew out of this study and which are presented in this chapter are generally interdependent and constitute a general plan for integrated education in Pittsburgh.

The plan calls for the construction during the next ten years of five Education Centers and three new middle schools. These eight new facilities would provide nearly 34,000 new student spaces and would enable Pittsburgh to retire or re-use a number of its many very old buildings. These new facilities, together with certain existing school buildings, would accommodate the secondary education program in a new 6-4-4 grade organization. In addition to the primary schools for prekindergarten children through fourth graders (which are not dealt with here), there would be fifteen middle schools for grades 5-8, and five Education Centers for grades 9-12. The plan provides for racial integration in all secondary schools.

Each of the middle schools and Education Centers would offer a comprehensive program and a full range of courses. None would be limited to a specialized academic or vocational concentration. Students would work not only in the school buildings but also in community facilities. The Education Centers and new middle schools would be constructed close to proposed transportation arteries, for they would have enrollments of four thousand to six thousand students, many of whom would depend on the system of superhighways and rapid transit now being considered in Pittsburgh.

Although these Education Centers would be constructed primarily to serve public school children, provision would be made for inclusion of a substantial number of children who would, at the same time, continue to be enrolled in nonpublic schools.

The plan assumes that Pittsburgh will take advantage of the virtually unprecedented opportunity of complete renewal of its plant for grades 9-12 by opening the Education Centers on a completely equal basis. This equalization would extend to all factors—equipment, teachers, counselors and administrative staff, program, racial composition—which create the reality and the image of fully equal opportunity and educational excellence. Compensatory education would be provided for all students for whom equal opportunity to develop full potential has been limited by environment or previous school experience. The plan makes no specific recommendations concerning primary schools, but it does recommend further study of some suggestions for the use of existing elementary buildings to achieve racial integration and other educational goals.

In this study we have not specifically examined the composition or assignments of the staff of the Pittsburgh Public Schools. Obviously certain grade patterns and curriculum revisions that flow from this report would have to be accompanied by reassignment of teachers, redesign of curriculum assignments, and reorganization of the administrative arrangements of the school system.

A. The secondary education program

In a democratic society all people must be educated, not a select few. We have a great body of shared understandings to pass on. Yet we have, too, great diversity of interest, hope, and talent among individuals. The key to education in a democratic society would seem to be found in the answer to the question, "How can general education be adapted to different ages and, above all, differing abilities and outlooks, so that it can appeal deeply to each, yet remain in goal and essential teaching the same for all?"[1]

The recommendations that follow attempt an answer to that question by insuring for every student (1) a balanced program from the basic areas of the curriculum[2]—language and mathematics,[3] the arts, science and technology, social studies, and physical education; (2) choice from a broad range of courses, at many levels of difficulty and intensity, within each of the basic curricular areas; and (3) concentrated study anchored in one of the basic curricular areas and related either to further academic work or to career or occupational endeavors. Thus, education would be common for all because all students work in each of the basic areas of curriculum; it is individual because each student makes choices within each area based upon his unique interest, talent, and ability and, eventually, upon his academic or occupational goals. Finally, although various courses might differ in approach or in level of difficulty, all would have authenticity of intellectual content.

In recent years the Pittsburgh Public Schools have taken great strides toward improvement of the secondary education program. Illustrative of these efforts are the attempt to blend vocational education more closely with academic education and the various developments in methods and materials under the Scholars Program. While the following recommendations involve certain departures from present practices, they carry the main directions of these improvements.

These recommendations are specifically directed at guiding new construction. As they are considered, three reservations should be kept in mind. They are not intended to provide a critique of Pittsburgh's present program. They do not detail methods and materials of instruction. And they do not call for immediate changes in program; much planning would have to be undertaken before they can be realized.

Recommendation: The program for secondary education in Pittsburgh should be designed so that

a. every secondary student has full access at his school or Education Center to the entire range of courses and subjects available to students at his particular educational level in the Pittsburgh public schools;

b. every student carries a balanced program, though not necessarily the same courses, ordinarily including at least one course from each of the basic curricular areas throughout his secondary education;

c. no student is foreclosed from choosing in grades 11 and 12 subjects necessary either for college admission or for immediate employment;

d. every student ordinarily chooses one of the areas of curriculum for concentrated study in grades 11 and 12.

Under these recommendations, the proposed course of study would maximize the choices open to a student each year by providing a wide variety of different courses, and it would maximize the choices open to him as he proceeded through secondary education by preserving all basic options for him until he reached the eleventh grade. At the same time, the student would be required to pursue a balanced course of study by selecting courses from each of the basic curricular areas. Such a balanced program would be designed to provide every student with an education program shared in substantial part with all other students and to provide the necessary foundation for subsequent study. Providing a balanced program, individual choice, and preservation of options will require careful and sensitive counseling.

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[1] *General Education in a Free Society, Report of the Harvard Committee* (Cambridge, Massachusetts: Harvard University Press, 1945), p. 93.

[2] The areas are not of equal weight with regard to the proportion of time students will be expected to give to each.

[3] In the area of language and mathematics every student will generally be required to take some course in English all through his secondary education. Language and mathematics are grouped together as symbolic skills. See Harry S. Broudy, Othanel B. Smith, and Joe R. Burnett, *Democracy and Excellence in American Secondary Education* (Chicago, Illinois: Rand-McNally & Co., 1964), pp. 161-75, 247.

Requiring all students to undertake a balanced program in these areas, while offering choices which allow his study to be a reflection of individual interest and ability, necessitates provision of extensive alternatives in each area. The full range of courses available for students in grades 5-8 should be offered at each middle school, and the full range of courses available for students in grades 9-12 should be offered at each Education Center. Therefore, each middle school and Education Center must serve enough students to make the offering of such variety economically possible.

Although it is important for each student to share common studies, it is equally important that eventually each be permitted to choose a particular area in which to concentrate some of his study. This concentrated study might center on occupational goals (such as tool design), on advanced study of a particular discipline (such as biology), on pursuit of related studies (such as foreign language), or on training in a skill or art (such as sculpting). Concentration on a subject may be construed as clinical or work experience or advanced study. A substantial portion, as much as 25 per cent, of each student's last two years should be occupied in concentrated study. Such time would afford the student the opportunity to penetrate beyond the survey level of a subject and to grapple with its basic assumptions and concepts at a depth attainable only with concentrated study. The student can thus test his interest and the strength of his commitment to a particular subject area. Whether his choice proves wise or unwise, the time spent in concentrated study will have pressed the student to assess his values and begin to understand the demands and rewards of commitment to a specific field or type of work.

Recommendation: Within the secondary education program directly related to preparation for employment,

a. the separate curricula for occupation or trades, known in Pittsburgh as "OVT" Programs, should be merged with the basic academic program by the time the Education Centers are ready for occupancy;

b. course work at the Education Centers should be given in the mechanical, electrical, building, medical, food, design, and communication technologies rather than in the particular occupations which are related to such technologies.[4]

Delaying the time when a student must choose courses which close off subsequent possibilities helps to preserve educational and career alternatives for him. Even after a choice is made, however, there should not be a sharp separation between the program of students who are preparing for a job at the completion of secondary school and the program of those preparing for further study. The Pittsburgh school department has already begun to integrate its vocational and academic programs. The present proposal further promotes this integration. Instead of selecting a vocational curriculum, job oriented students would concentrate in one of the basic curricular areas noted on page 10. Thus, within any basic area of concentration, there would be students selecting various options of courses leading to advanced study, immediate employment, or some combination of the two. A student interested in auto mechanics and a student interested in physics would both be studying under the same faculty of science and technology. As part of their programs, both students might take the same or similar basic courses in physics or mechanical technology.

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[4] Although these recommendations will present difficulties and require adjustments in the accountability for federal and state vocational education funds, it is expected that these adjustments can and will be effected.

For those students who are preparing for immediate employment after secondary school, secondary education must attempt to provide a balance between two goals. On the one hand, the student must develop sufficient skills to be assured initial employment. On the other hand, the student must have learned language and conceptual skills and have acquired sufficient background in the technology of his occupational area to enable him to advance to new jobs and adjust to future technological changes.

The former is achieved primarily through clinical or work experience, which we recommend as a part of the program for the eleventh and twelfth grades. The latter is achieved by providing courses in basic technological subjects that underlie clusters of specific occupations. For example, the occupations designated by the Pittsburgh school system as Small Appliance Repairs, Electric Power, and Electronics Technician have a common basis in electrical or electronic technology; the occupations of Service Station Attendant, Small Gas Engines Repair, Machine Operator, and Auto Mechanic have a basis in mechanical technology. The preparation for such occupations received in school should be in the basic electrical/electronic or mechanical technology offered in each of the Education Centers. This preparation would primarily consist of studying and experimenting with the basic technical and scientific principles. Clinical or work experience at appropriate facilities away from the Center would provide training in the application of the principles to particular jobs.

> **Recommendation:** Public and private community agencies and institutions should be utilized whenever their facilities and personnel can carry out the education program more effectively than the school.

The utilization of the resources of personnel and facilities outside of school should be an integral part of Pittsburgh's comprehensive educational program. Use of these nonschool resources will be particularly relevant for concentrated study in the form of clinical or work experience or advanced study. The details of such use of outside resources will necessarily depend upon the particular course or subject involved and the arrangements by the school department for the use of the necessary facilities of private and public agencies in Pittsburgh. The use of community facilities is not new to the Pittsburgh Public Schools. Only the scope of the proposed use is a departure. It is clear that implementing such a program would involve a major administrative undertaking to build and perfect the myriad relationships which would be involved.

Many of the more specialized courses in the educational program require resources which may not be easily or well provided in school. This is true because the facilities and equipment required are too expensive to obtain and keep current; because the talents of persons most proficient in the area are not found in the schools; or because the school context is not a suitable substitute for the context in which the actual task is carried out. When new construction is undertaken, use of school space and funds for such things as practice hospital rooms, or cleaning and pressing equipment should be avoided whenever provision can be made for use of such facilities outside the school. The community at large provides such facilities in the context of much more suitable learning situations.

Similarly, the school department should not duplicate an observatory or a planetarium such as those which serve the entire city of Pittsburgh. It should, rather, attempt to use these existing facilities for educational purposes. In short, the general rule should be that the schools duplicate special facilities only when an institution, agency, office, or business in the community cannot make their facilities suitably available for purposes of public education.

Of course the basic educational program will continue to be provided in the schools. There must be labs and shops, tools and equipment—small motors, electrical panels, microscopes—for all students to use in developing manipulative as well as conceptual skills. But, in the main, the application of learning to specific tasks, complex machinery, or elaborate facilities should occur out of schools in places such as auto body shops, hospitals, the Allegheny Observatory, and the Westinghouse labs.

Many more examples of nonschool facilities which should be utilized for particular courses for public school students could be named. Other educational institutions are perhaps most obvious. The proposed Community Colleges seem a natural source for concentrated study outside the regular secondary schools. The advanced course work already available to some students should be expanded at the University of Pittsburgh, Carnegie Institute of Technology, Chatham College, and Duquesne University. Specially gifted or trained teachers in the nonpublic schools might provide education in certain areas not available in the public schools. The schools obviously cannot reproduce the special advantages of the Carnegie Museum or the Playhouse for study or experience in art and drama. City Hall might be the best place to pursue advanced study of political science. Hospitals and clinics are obviously the appropriate locations for clinical nursing experience. Office practice might be taught in a Golden Triangle office building, in conjunction with an office of one of the city's businesses.

In these cases, faculty from the school should join with personnel in the institutions, plants, and offices in educating the students. Equitable financial arrangements could be worked out between the school department and participants in these cooperative programs. For example, the school department might contribute to the salaries of such personnel or hire them on a part-time basis; the department might rent facilities; and where additional space is needed to make the existing specialized facility suitable for educational purposes, the department might build "spot classroom" areas.

> Tomorrow's school will be a school without walls—a school built of doors which open to the entire community.
>
> Tomorrow's school will reach out to the places that enrich the human spirit—to the museums, the theaters, the art galleries, to the parks and rivers and mountains.
>
> It will ally itself with the city, its busy streets and factories, its assembly lines and laboratories—so that the world of work does not seem an alien place for the student.
>
> Tomorrow's school will be the center of community life, for grownups as well as children—"a shopping center of human services."
>
> —Lyndon Baines Johnson[5]

These first three recommendations provide the basic guidelines for a sound secondary education program for Pittsburgh. Although this report does not develop detailed course specifications within these guidelines, it does suggest two points of curricular planning which merit particular attention in development of the overall program.

Recommendation: The secondary educational program of every student should include study in the arts continuing through grade 12.

The heavy weight given to verbal communication in our schools tends to distort the student's education—both the scope of his preparation and his perception of what is of value. The opportunity to develop other forms of expression—in music, dance, drama, films, the fine arts—must be available. As Gyorgy Kepes has observed about one aspect of the arts, "Vision can no longer be employed simply to support verbal and conceptual meanings; its potential as a cognitive power in its own right must be exploited. Art education has to be re-evaluated in the broader context of visual thinking."[6]

The schools have too long been wedded to printed words and verbal instruction. Some courses in the arts have been available in Pittsburgh, as elsewhere, but this area of study and practice has been neither required nor given substantial importance. The entire range of nonverbal communication should be opened to each student and the opportunity provided for development of varied forms of expression and enjoyment.

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[5] Address of President Johnson to the American Association of School Administrators, Atlantic City, February 16, 1966.

[6] *Education of Vision* (New York: George Braziller, Inc., 1965), p. v.

Our next generations must be as concerned with the beauty and taste of our environment as with its efficiency. In preparation for a more crowded, urbanized, and leisure-filled world, students must be provided with the means to develop talent for shaping the environment of their homes and community. It has already been observed that the city's artistic and cultural facilities are among its most important nonschool resources. Use of these community resources should be combined with a strong program in the arts conducted within the middle schools and Education Centers.

> **Recommendation:** The educational program of every student from grades 7 through 12 should include, as part of the student's work in the social studies area, a sequence of courses dealing with the problems and potential of the student's immediate community and society.

Integration of community and school resources should extend also to citizen education. This study should be specifically directed at introducing the student to the occupational, social, and cultural life of his environment; at sharpening his own interest in his city's problems and potential; and at developing, through study and action, his sense of responsibility for social decisions in his and his neighbor's interests. The program would be built around certain great issues which are common to all ages—war and peace, equality and intolerance, disease and poverty, production and conservation, beauty and efficiency, crime and justice. The specific focus would vary from year to year, and the curriculum material would be developed and altered by participating teachers. The program could consider such issues as urban renewal, civil rights, political campaigns, public taste.

Although this program is lodged within the area of social studies, many faculty members should participate in an interdisciplinary discussion of the issues. A heavy reliance would be placed, as well, upon drawing on specialized interests and talents from all areas of the community.

In early secondary grades, each student might be introduced to the problems and potential of his community through frequent visits—in person and by television—to various institutions and agencies. In grades 9 and 10 emphasis might be on developing the student's self-interest in his community; that is, he would consider the city's opportunities for employment and for social, recreational, and cultural experiences. Emphasis might then shift to the recognition of mutual self-interests and competing self-interests; that is, learning about and practicing the process of developing concensus and mustering the power of the community's political, economic, and social instruments. During the last two years, the course might entail the student's spending a considerable portion of his school time in the community in contact with private and public figures dealing with live issues.

This report has presented basic guidelines for educational programs—guidelines which should influence new construction and adaptation of schools in Pittsburgh. Other than suggesting five broad curricular areas and certain developments of courses in applied technologies, the arts, and the social studies, it makes no specific recommendations for subject content or teaching techniques. The methods and materials of instruction within these guidelines, we believe, are best selected by the school department staff in Pittsburgh.

> **Recommendation:** Each Education Center should provide, in support of the educational program, a range of ancillary services, including research and development, inservice teacher training, development of instructional aids and materials, and offices for the development and maintenance of school-community relationships.

Instructional materials now change with amazing speed. Pittsburgh should not attempt simply to keep up with these changes. Rather it should continue, as it has with certain aspects of the Scholars Program, to commit its own resources to innovation. A regular and continuing activity of the school system should be to foster new ideas and new approaches, to try them out, to evaluate them, and finally to discard or to modify them and begin anew. One of the most critical areas of program development is the preparation of materials and techniques for remedial and compensatory education. The success of efforts recommended in this report for the education program and for racial integration will depend on the school's commitment to providing the means for all students to catch up to where their native talents ought to take them.

With comprehensive Centers of five thousand students and more, most of these ancillary educational services can and should be duplicated at each Education Center; and competition between the schools in producing educational excellence should be encouraged. But this does not mean that the five Centers, or the middle schools, should become entirely separate and self-sufficient. What is produced of excellence at one should be rapidly made available to other Centers and schools. Similarly, personnel of quality, whether in teaching, research, or teacher training, should be allocated throughout the system and not permitted to concentrate at a single Center.

The personnel involved in these ancillary services should maintain a steady communication with each other, with their related schools, and with schools throughout the system. Though these ancillary services would be under the school system's auspices, they should involve also such nonschool personnel as university scientists, humanists, and educators and people working in public life and private industry.

Each Education Center will need, in addition, an effective office to develop and direct continuing school-community relations—to arrange educational experiences in community facilities and to manage the use of the Education Center by the community.

B. The construction of new secondary facilities

To carry out the secondary educational program broadly outlined in the previous section, construction of each of Pittsburgh's secondary school buildings should be planned so as to fulfill at least four basic needs: sufficient space to bring together the necessary equipment and personnel to offer a full range of courses in science and technology, the arts, language and mathematics, social studies, and physical education; efficient physical relationships between the spaces and equipment of related courses, such as science laboratories and shops for technology; provision of a means of maintaining the individual student's sense of identity and importance despite the large facility and student body; and space for nonschool personnel working in collaboration with school personnel on the parts of the educational program provided within the school. Furthermore, buildings should be located so that they are within easy reach of community facilities used in carrying out the educational program and the ancillary services.

Pittsburgh's present high schools cannot fulfill these basic requirements. The secondary plant is crowded, racially segregated, old, and lacking in facilities and sites adequate for the educational program of grades 9-12. The enrollment of Pittsburgh's thirteen regular high schools was 23,336 as of March 30, 1966. The total capacity of these buildings as calculated by the Harvard staff is 19,881. The crowding is most acute in Allderdice, Langley, South Hills, Perry, Gladstone, and Westinghouse, where there are enrollments of 3082, 1910, 2218, 1353, 1291, and 2642, respectively, in buildings rated by the Harvard staff at capacities of 2374, 1180, 1570, 1049, 1046, and 2188.

The most extreme racial segregation occurs in Westinghouse, which is 92.9 per cent Negro, Herron Hill, which is 99.8 per cent Negro, and Fifth Avenue, which is 92.9 per cent Negro and in several high schools which are virtually all-white.

Allderdice, constructed in 1927, is the newest of Pittsburgh's high schools. Allegheny and Fifth

Avenue, the two oldest, were both constructed before 1900. The average high school age is fifty-four years. The facilities within the schools are generally outdated for a contemporary education program for grades 9-12. And in many cases, the sites are not adequate for purposes of physical education at this age level.

Although the facilities in these buildings are generally inferior for carrying out an educational program for children in the ninth through twelfth grades, they would, for the most part, provide improved facilities for secondary school children below the ninth grade. Thus, the availability of such facilities as gymnasiums, auditoriums, and science laboratories recommends the present secondary buildings temporarily for the education program for these middle school children, who, in their present buildings, often lack such equipment.

Moreover, most of the secondary buildings are large enough to accommodate the assembly of services and equipment necessary to provide a broad range of courses appropriate to children in grades 5 through 8. Of course, assignment of the middle school children to these existing buildings must be done in a manner which will prevent overcrowding or racial segregation.

In certain special situations, middle school buildings will have to be constructed. There is no existing high school or other secondary facility in the entire southwestern section of Pittsburgh. Recently this has been one of the most rapidly growing areas of the city, and because it has a substantial portion of Pittsburgh's open land, such growth is likely to continue. The total enrollments to be served by the attendance district proposed for this area and a section of the Hill are very large. This single large attendance area could be further divided into two districts served by separate middle schools or it could be retained as a single district served by one large middle school appropriately divided into separate units. This report suggests utilizing separate schools and separate districts, referred to here as South A and South B. Because of the possibility of having a single large attendance area, the report does not specify how the district should be divided except that both South A and South B should include a substantially equal division of both the southwestern and Hill sections.

A new middle school is also recommended in one of the Central I middle school districts although Westinghouse High School is located within this district. Westinghouse is not the oldest or most deteriorated high school in Pittsburgh, but it is 44 years old and has many physical defects, as outlined in Appendix C. Moreover, Westinghouse has become identified as a "Negro school," and it is located within a densely Negro residential area. The new middle school will have an enrollment which is approximately half-white and half-Negro. Achieving a successful education program at a racially integrated school in this district will be much more likely if a new structure with a new image is constructed in a section of the district where whites reside, or where both Negroes and whites reside.

It is also recommended that, because of its age and condition, South Hills High School not be used as a middle school. Prospect Junior High School is a newer and better facility, and it should be used to serve the middle school district in which both Prospect and South Hills are located.

Even though most of the existing high school buildings are satisfactory for temporary use by the lower secondary grades, they are still very old on the average, and long-continued use of them is not desirable. Therefore, in preparing these buildings for the use of the younger children, remodeling should be minimized. Investment in various types of instructional aids and other equipment which can later be moved to new schools should be accentuated.

> **Recommendation:** Five large Education Centers should be constructed to replace existing high school buildings as the centers of the education program for grades 9-12.
>
> **Recommendation:** Three new middle schools should be constructed to serve Pittsburgh's middle school enrollments and twelve of the existing

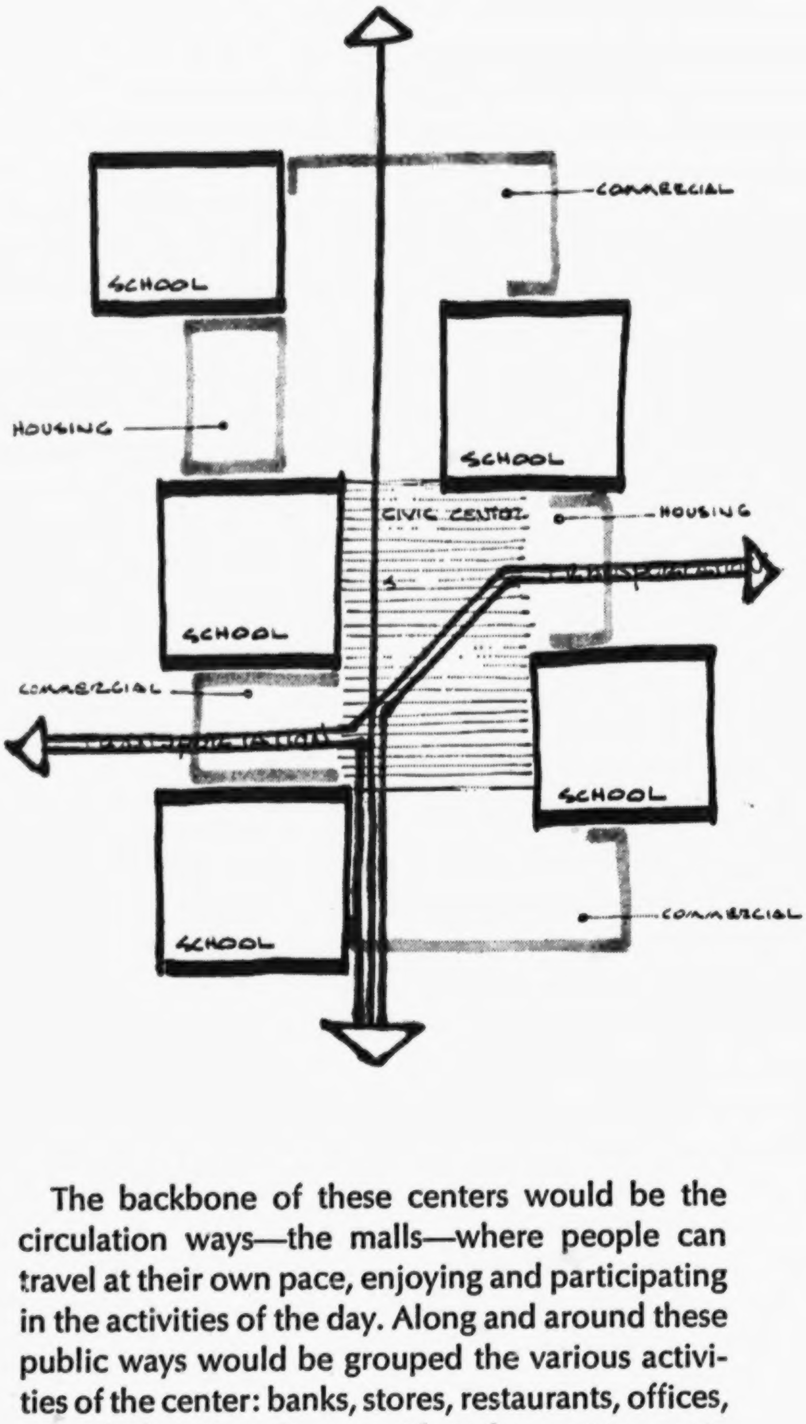
secondary buildings should be adapted to the same use.[7]

Recommendation: Upon completion of the present recommended building program, but no later than 1975, Pittsburgh should begin to develop plans for the replacement of all twelve of these adapted secondary buildings with up-to-date middle schools of sufficient size and appropriate location to carry out the education program and to serve integrated enrollments.

The construction of new spaces for nearly 34,000 pupils carries a mandate to provide buildings which will facilitate the offering of not only what is new and best in education today but also what will be new and best in the year 2000. It means designing and building with the utmost imagination and flexibility. Designers should think about school structures that can be readily changed from one type of instruction to another, structures with space that might be rented out for other than school purposes during low enrollment years, structures which lend themselves to expansion and to increasing integration with the community. To describe the general characteristics of the new construction, this section discusses the proposed Education Centers, but what is said should be applied, where relevant, to the new middle schools as well.

In Pittsburgh, as in other large urban areas, educators and urban planners have begun to focus attention on the need for relating school construction to the city's other facilities and activities. We propose that Pittsburgh's five Education Centers be located in newly designed urban centers which would constitute an important part of the city's renewal. These urban centers would be linked together by rapid transit and super highways and would share many of the unique resources of the city. But each urban center should be able to serve many of the diverse needs of a substantial segment of the urban population, something on the order of 100,000 people. In such a center, citizens should be able to find employment, purchase goods, further their education, rent housing, play games, sit in the sun, attend concerts, and so on.

DIAGRAMATIC LAYOUT OF AN URBAN CORE



The backbone of these centers would be the circulation ways—the malls—where people can travel at their own pace, enjoying and participating in the activities of the day. Along and around these public ways would be grouped the various activities of the center: banks, stores, restaurants, offices, schools, housing. Care must be taken not to create monotonous concourses of commerce where people tend to become lost in the endless repetition of store fronts. Nodes of activity must be created. Scale must change from wide busy pedestrian malls to intimate little walkways. Some of these pedestrian ways should be open to the sun, some enclosed; some should have surroundings which are high and spacious, some low and confining.

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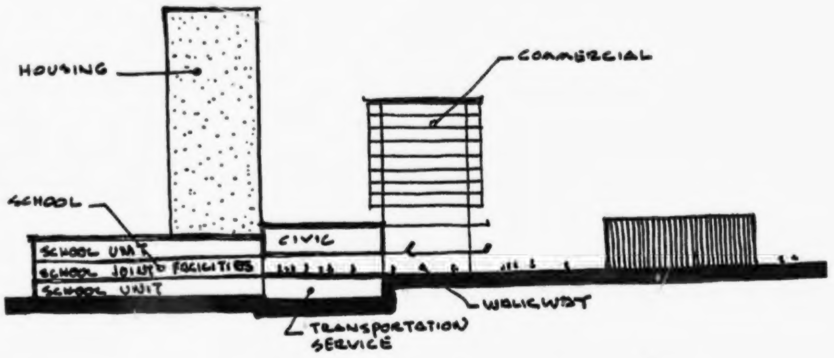
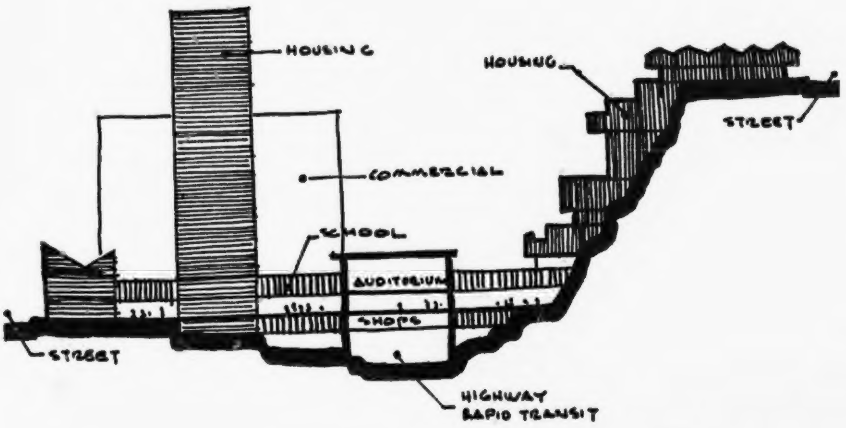
[7] The total number of middle schools and the number of existing buildings recommended for adaptation are based in large part on the estimated number of students to be served in the attendance districts recommended in the following section and on the capacity of the buildings located in these districts which are suitable for continued use.



DIAGRAMATIC SECTION THROUGH
URBAN CENTER—FLAT SITE



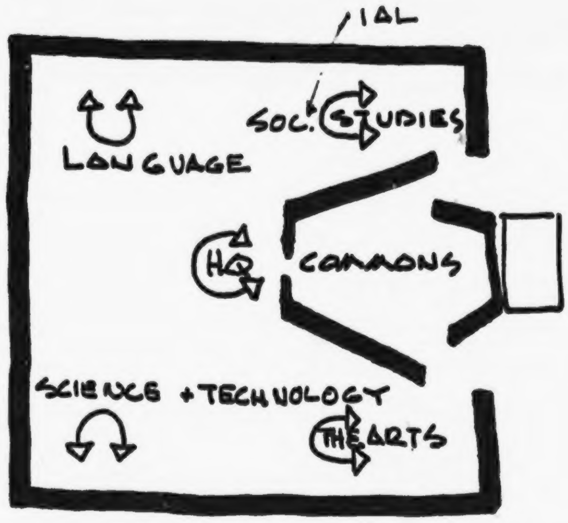
DIAGRAMATIC SECTION THROUGH
URBAN CENTER—STEEP TERRAIN

Part of the space in these urban centers should be devoted to the Education Centers recommended in this report. Educational facilities should be planned and constructed simultaneously with other facilities. Such integrated planning will permit more flexible facilities and also should eliminate any tendency to duplicate or to concentrate all schooling activities in one part of the complex.

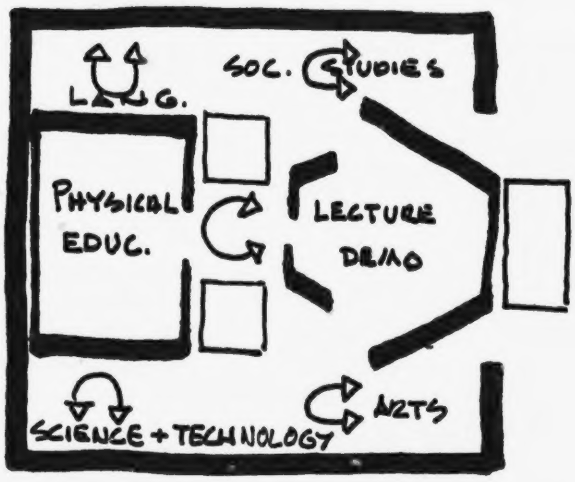
Since the individual student or teacher will not need to go to every part of the Center, all schooling locations need not be tightly grouped. Instead, they should be related to one another and to the community facilities in terms of the uses to which they will be put. For example, whereas the main library of the Center should be easily accessible to everyone, individual science laboratories and regular classrooms need not be.

In order to provide the wide range of subjects required by the education program, each Education Center will be bringing together very large numbers of students. The creation of a subsystem of student groupings will make it possible to preserve the student's identity in these large educational facilities. These groups should be small enough to permit each student to maintain his sense of individuality, yet large enough by themselves or by combination with other groups to expose the student to a wide range of educational experiences. The Education Center buildings should therefore be constructed so that these groups of students are provided with the necessary physical units of space and equipment, and these units should be so arranged that two or more of them can be combined for various educational and social activities.

Much of a student's schooling experience should be within these smaller units. Each such unit would contain as few students as educational demands would allow, roughly five hundred to six hundred students, and each would have its own teachers and administrative and guidance personnel. The student population of each unit should have the same distribution of interests, ages, and races. Each unit should be planned around a common area where students and staff can gather for meetings or meet informally. Branch library resources, teachers' offices, administrative and guidance facilities, and areas for independent study should be grouped nearby.


IAL
SOC. STUDIES
LANGUAGE
HQ
COMMONS
SCIENCE + TECHNOLOGY
THE ARTS

DIAGRAMATIC LAYOUT OF
CURRICULUM AREAS IN A UNIT

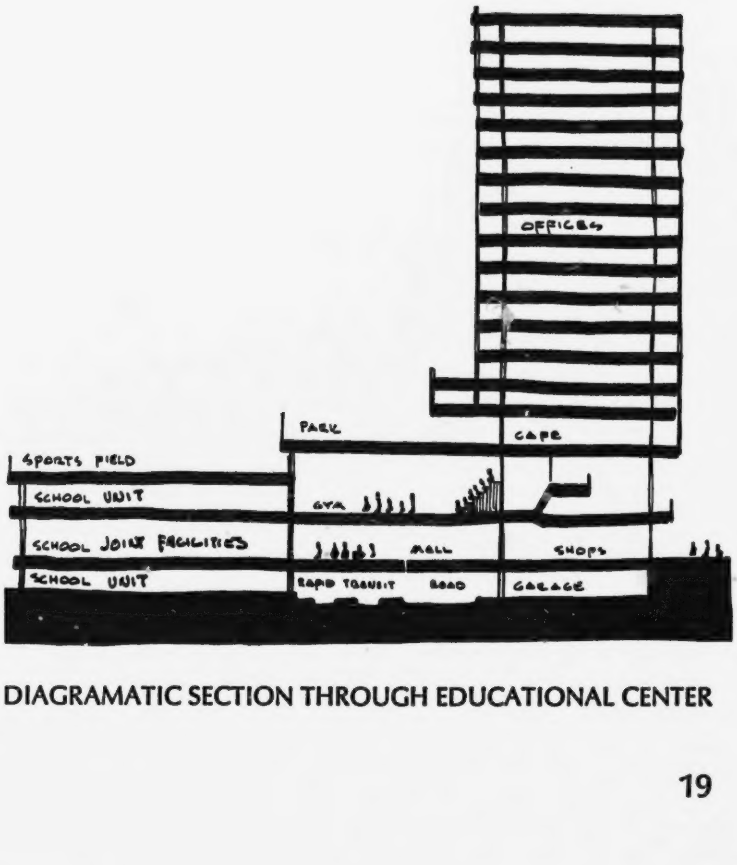

LANG.
SOC. STUDIES
PHYSICAL EDUC.
LECTURE DEMO
SCIENCE + TECHNOLOGY
ARTS

DIAGRAMATIC LAYOUT OF JOINT FACILITIES

Units might be most conveniently and economically arranged in groups of two and be accompanied by those larger or more specialized facilities which they can together fully utilize. Perhaps each unit should occupy a floor of a building with their joint facilities located in a floor between. A further refinement might be placing the five curriculum areas in the same area on each floor so that students and staff working in particular curriculum areas could have easy access to their counterparts in the other unit and to the more specialized joint resources located on the floor between the two units by simply moving vertically.

The several units which comprise a Center would share certain central resources like the main library, the theater-concert hall, and the spectator sports center, resources which must be accessible to every student or which will draw some students from each unit. Ideally, many of these facilities would also be used by citizens who are not enrolled in the schools, thus further integrating schools and community.

The integration of school and community in providing the education program means that many aspects of the program should not be built into the school buildings, as the previous section on the


OFFICES
PARK
CAFE
SPORTS FIELD
SCHOOL UNIT
GYM
SCHOOL JOINT FACILITIES
MALL
SHOPS
SCHOOL UNIT
RAPID TRANSIT
ROAD
GARAGE

DIAGRAMATIC SECTION THROUGH EDUCATIONAL CENTER recommended program for secondary education has pointed out.

On the other hand, this integration will place new requirements on school construction. The Education Centers will have to provide space and facilities for nonschool personnel who come into the school from business, government, or university to participate in the in-school program or to work in the ancillary educational facilities, such as research and development. The Education Centers should be schools for adults as well as children, and they may be used for adult education at various times of day and night. Such use would require space adaptable to adult programs, and it might require some space reserved for adult day-time programs. Of course, the Centers should be planned for week-long and year-round use. This "after-school" use could include a wide variety of programs outside the regular curriculum, such as the Junior Academy of Science, which would bring together public and nonpublic school children with members of the scientific community in Pittsburgh.

The Centers should be linked to the larger community, other Centers, and to the middle and elementary schools through rapid transit and highways and through telephone, radio, television, and a computer communication system. For example, two-way television will be needed to facilitate such linkage and to multiply the experiences and the range of competence that can be brought into classrooms. Here, too, community resources, such as WQED—the educational television station—should be utilized. In addition, the possibility of including Instructional Television Fixed Service on frequency bands especially reserved by the Federal Communications Commission should be explored. In order to provide *two-way* television, classrooms should be equipped for transmission as well as reception. With two-way television, any given classroom is part of the educational television network of the other classrooms and therefore children at one end of a hook-up are able to participate actively in a lesson originating at the other end. Where it is possible, the nonpublic schools should be included in the system.

Finally, although education requires some highly specialized "hardware," it does not, in general, require a highly specialized structure. Thus, it is possible to construct school facilities capable of accommodating rapidly changing educational requirements. By using such construction, the Education Center can adapt to changes in education and also be adapted to nonschool functions.

Using conventional concepts of school construction, sites of between thirty and forty acres will be needed for the Education Centers and fifteen to twenty for the middle schools. And the sites should have a substantial amount of level space for outside physical education activity. The acquisition of sites of these sizes and of this character will be very difficult. In densely populated urban areas—particularly where topography limits available land as it does in Pittsburgh, it is possible to utilize new construction techniques to provide needed facilities on a minimum of land. Building vertically rather than horizontally, placing athletic fields on roofs, allocating several floors of a high rise structure to athletics, even creating an "all weather" sports center with movable walls which could be retracted to let in fresh air and sun in good weather, all are possible. Such construction techniques could reduce by as much as 50 per cent the land needed for school purposes. Nevertheless, every effort should be exerted to obtain the largest possible sites for the combined use of school construction and other urban facilities. These sites should be developed so as to accommodate school and nonschool activities, and flexible arrangements which would intersperse school and other uses should be adopted.

Sites for new educational facilities could be more readily obtained if land acquisition efforts of the Board of Education are coordinated with the efforts of urban renewal and other city agencies. The urban centers and the educational facilities within them should be designed as drawing points for all of the citizens of the five large districts indicated in the following section of this report. The sites should therefore be selected to create common meeting grounds for the older, traditional neighborhoods. Innovative designing can make available sites in Pittsburgh which will fit these criteria. Parts of the centers can be built as air right structures over highways or rivers or as bridges across canyons. And such building can and should be done without marring the natural beauty of Pittsburgh's rivers, hills, and valleys. Structures which span valleys can also bring together neighborhoods long isolated by topography. Steep hills need not be barriers either to construction or to access routes. Hills and valleys can become architectural assets in planning exciting urban centers for Pittsburgh.

C. Organization of schools by grade level and attendance district

The number and size of schools and the grades served by each school are interrelated. For simplification, the next two sections will consider separately first the grade organization and then the attendance district organization for the recommended secondary education plan.

GRADE ORGANIZATION

> **Recommendation:** A grade organization consisting of primary schools for grades prekindergarten (PK) through 4, middle schools for grades 5 through 8, and Education Centers for grades 9 through 12 should be established in Pittsburgh at the completion of the construction of the middle schools and Education Centers recommended in this report.

This grade organization is in part a result of the decision to provide an educational program for grades 9-12 in new Education Centers. Transferring the 9-12 program to these new facilities will make existing high school buildings available for the 5-8 program, for which they are adequate. Utilizing these relatively large buildings for the indicated middle school grades will extend racial integration down through the fifth grade.

The recommended grade organization should not, however, be taken as a model for all time. We do not find any compelling reason to recommend middle schools for grades 5-8, rather than for grades 6-8 or 4-8 on the basis of child development theory.[8] There are very great individual differences at any age or grade level, and therefore, under any grade organization, provision must be made for wide variations in physical, emotional, and educational development at each grade level. But there is a significant advantage in bringing children as early as the fifth grade into schools which contain such facilities as laboratories, science equipment, and gymnasiums. With today's education, children are able to use and need to use equipment and facilities as were formerly installed only in high schools. Until new middle school buildings are constructed, the old high schools and other secondary school buildings will best meet the needs for educating children at this level.

Moreover, the capacities and locations of these buildings are sufficient to provide both racial integration and full utilization of facilities for grades 5-8. The capacities and locations of these buildings are not adequate to include grades 4-8 in the middle school. If these buildings were used for grades 6-8 only, the result would be less satisfactory as judged by standards of building utilization, racial integration, and shape and size of attendance districts. In addition, the fifth grade would be excluded from the racially integrated middle schools, and elementary schools which included the fifth grade would have less space flexibility and be more difficult to integrate than if they included only prekindergarten through grade 4.

SECONDARY SCHOOL DISTRICT ORGANIZATION In preparing its districting recommendations, the Harvard staff considered a number of factors—including school size, distance, topography, location of available sites and existing facilities, access to

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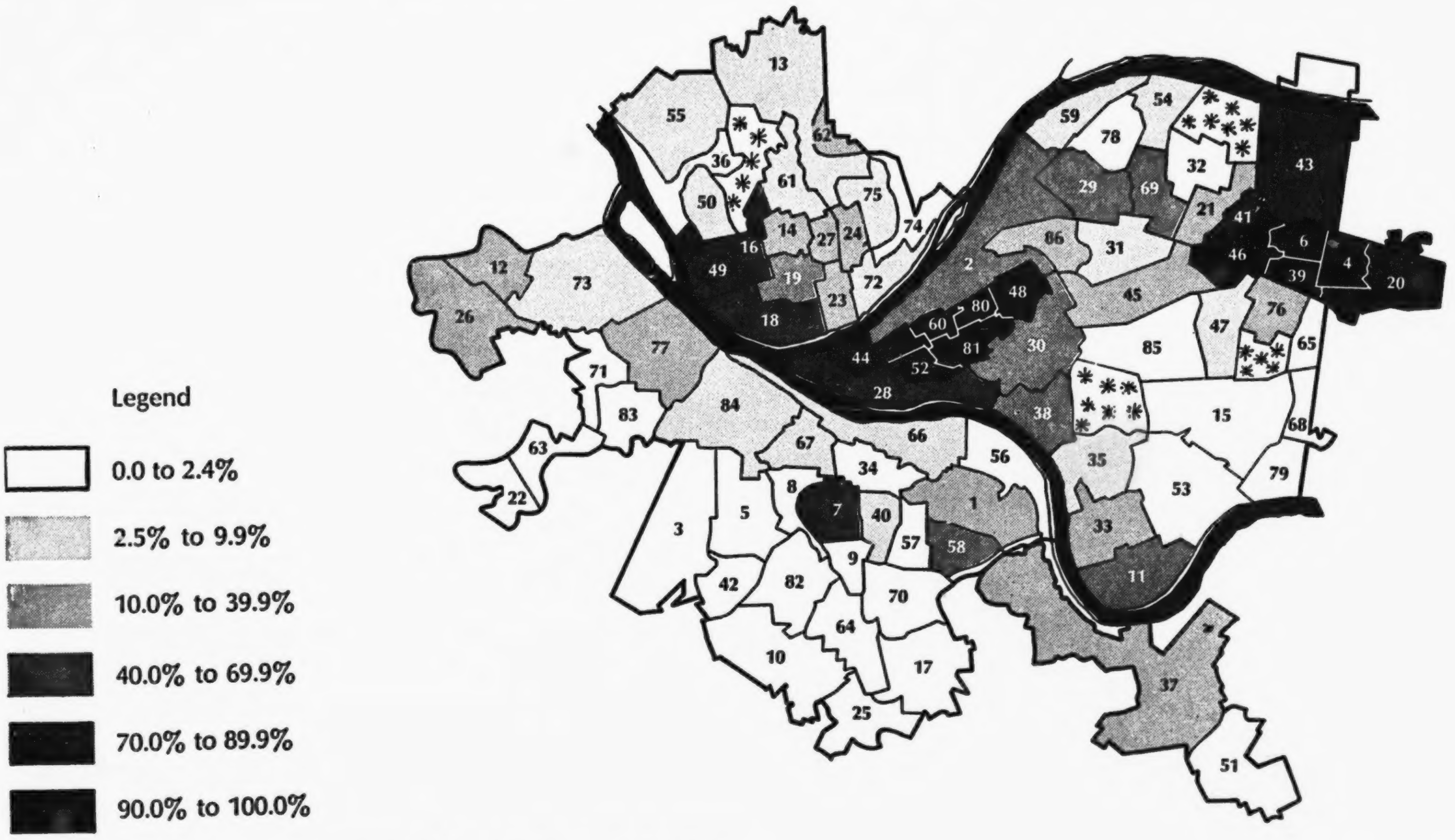
[8] See Robert H. Anderson, *Teaching in a World of Change* ("The Professional Education for Teachers Series" [New York: Harcourt, Brace and World, Inc., 1966]), pp. 22-26.

MAP III-1 **Negro Percentage of Enrollments (all grades) in Elementary School Districts***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☐ 0.0 to 2.4%
▨ 2.5% to 9.9%
▨ 10.0% to 39.9%
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51

* Parks and cemeteries not within existing school districts.

*Based upon special school census conducted by Harvard staff in December, 1965. The numerical label in each district corresponds to the district as identified in Tables III-1 and III-2.

transportation lines, safety, racial integration, and the secondary education program to be provided. In developing districting recommendations none of these factors can be ignored and none can be given absolute priority over all others. Each tends to qualify the significance of the others. The relevance of distance varies greatly depending upon topography and transportation. Achieving integration is inhibited or facilitated by features of topography, distance, or transportation—including the location of suitable river crossings. As the number of schools and school districts serving any grade level increases, it becomes increasingly difficult to provide integrated schools and, in the case of new schools, to find satisfactory sites. Because of the residential concentrations of whites and nonwhites, which was outlined in the previous chapter, the achievement of city-wide school integration can be accomplished only by some combination of large districts and transportation which brings together sections of the city which are separated by distance or physical barriers. For example, the existence of rapid access from the central city to the south side of the rivers makes it possible to combine sections of the Hill in the center of the city with sections of west and southwest Pittsburgh.

The adequacy of sites is influenced by proximity to the transportation network. The size of recommended new schools affects, and is affected by, education program, logistics, and racial composition. Where existing buildings are to be used, their condition, size, and location influence the choice of which ones are recommended for use; and the size of the buildings chosen largely deter-

TABLE III - 1

Public School Enrollments in Each Elementary District in Pittsburgh

Grades 5-8*

Elementary District	*White*	*Negro*	*Elementary District*	*White*	*Negro*
1 Arlington	204	61	44 Letsche	2	229
2 Arsenal	92	143	45 Liberty	170	53
3 Banksville	202	2	46 Lincoln	11	268
4 Baxter	5	673	47 Linden	303	18
5 Beechwood	385	8	48 Madison	1	345
6 Belmar	8	462	49 Manchester	33	345
7 Beltzhoover	41	358	50 Mann	158	11
8 Boggs Avenue	99	0	51 Mifflin	288	0
9 Bon Air	72	0	52 Miller	6	344
10 Brookline-Carmalt	357	0	53 Minadeo	487	0
11 Burgwin	139	177	54 Morningside	112	18
12 Chartiers	80	48	55 Morrow	259	19
13 Chatham	204	7	56 Morse	74	11
14 Clayton	242	56	57 Mount Oliver	184	0
15 Colfax-Davis	545	4	58 Murray	126	190
16 Columbus	63	268	59 McCleary	109	3
17 Concord	178	0	60 McKelvy	0	377
18 Conroy	76	215	61 McNaugher	197	23
19 Cowley	121	262	62 Northview Heights	285	158
20 Crescent	39	538	63 Oakwood	44	1
21 Dilworth	203	45	64 Overbrook	172	4
22 East Carnegie	47	0	65 Park Place	67	0
23 East Park	112	10	66 Phillips	206	30
24 East Street	80	15	67 Prospect	313	27
25 Fairview	70	2	68 Regent Square	38	0
26 Fairywood	121	43	69 Rogers	205	151
27 Fineview	105	29	70 Roosevelt	169	0
28 Forbes	37	119	71 Schaeffer	136	0
29 Fort Pitt	142	151	72 Schiller	130	9
30 Frick	110	217	73 Sheraden	359	15
31 Friendship	133	17	74 Spring Garden	171	1
32 Fulton	335	4	75 Spring Hill	76	7
33 Gladstone	130	105	76 Sterrett	85	15
34 Grandview	173	4	77 Stevens	278	79
35 Greenfield	337	15	78 Sunnyside	435	10
36 Halls Grove	69	2	79 Swisshelm	81	0
37 Hays	74	14	80 Vann	0	362
38 Holmes	93	102	81 Weil	4	432
39 Homewood	3	294	82 West Liberty	155	0
40 Knoxville	143	9	83 Westwood	171	1
41 Larimer	18	267	84 Whittier	213	6
42 Lee	100	0	85 Wightman	423	3
43 Lemington	30	364	86 Woolslair	127	31

Source: Special School Census, December, 1965.

* This table represents the white and Negro public school children, for grades 5-8, residing within the geographic areas of the elementary school districts. The table does not indicate the actual enrollments of elementary schools.

TABLE III - 2

Public School Enrollments in Each Elementary School District in Pittsburgh

Grades 9-12*

Elementary District	*White*	*Negro*
1 Arlington	430	38
2 Arsenal	362	98
3 Banksville	177	2
4 Baxter	10	399
5 Beechwood	374	12
6 Belmar	10	329
7 Beltzhoover	82	285
8 Boggs Avenue	125	0
9 Bon Air	53	0
10 Brookline-Carmalt	487	2
11 Burgwin	207	126
12 Chartiers	57	40
13 Chatham	395	20
14 Clayton	221	31
15 Colfax-Davis	633	2
16 Columbus	112	180
17 Concord	419	0
18 Conroy	88	139
19 Cowley	166	198
20 Crescent	39	392
21 Dilworth	223	45
22 East Carnegie	49	0
23 East Park	85	11
24 East Street	128	6
25 Fairview	136	1
26 Fairywood	96	32
27 Fineview	95	16
28 Forbes	77	73
29 Fort Pitt	186	112
30 Frick	205	195
31 Friendship	191	8
32 Fulton	312	2
33 Gladstone	235	69
34 Grandview	338	2
35 Greenfield	285	10
36 Halls Grove	94	2
37 Hays	86	19
38 Holmes	155	66
39 Homewood	8	214
40 Knoxville	274	5
41 Larimer	33	146
42 Lee	164	0
43 Lemington	58	262
44 Letsche	7	174
45 Liberty	209	37
46 Lincoln	35	185
47 Linden	279	11
48 Madison	27	293
49 Manchester	64	214
50 Mann	233	7
51 Mifflin	284	0
52 Miller	3	249
53 Minadeo	534	2
54 Morningside	168	9
55 Morrow	346	18
56 Morse	216	12
57 Mount Oliver	188	1
58 Murray	166	111
59 McCleary	176	4
60 McKelvy	3	318
61 McNaugher	254	14
62 Northview Heights	173	106
63 Oakwood	51	1
64 Overbrook	225	2
65 Park Place	56	0
66 Phillips	374	23
67 Prospect	338	14
68 Regent Square	43	1
69 Rogers	216	96
70 Roosevelt	204	0
71 Schaeffer	137	0
72 Schiller	218	2
73 Sheraden	474	20
74 Spring Garden	219	1
75 Spring Hill	117	1
76 Sterrett	100	11
77 Stevens	311	35
78 Sunnyside	426	4
79 Swisshelm	75	0
80 Vann	3	326
81 Weil	11	364
82 West Liberty	169	0
83 Westwood	131	3
84 Whittier	260	13
85 Wightman	328	2
86 Woolslair	283	15

Source: Special School Census, December, 1965.

* This table represents the white and Negro public school children, for grades 9-12, residing within the geographic areas of the elementary school districts. The table does not indicate the actual enrollments of elementary schools.

mines the size of enrollments recommended. Many alternative districting patterns were examined before the pattern recommended in this section was adopted. The particular pattern adopted represents an accommodation of each of the relevant factors to the needs and limitations determined by the others.

Enrollment data for all public school children were available or obtainable on the basis of the areas which comprise the present elementary attendance districts. Consequently, these geographical districts were used as the component units for developing the recommended middle school and Education Center districts. The elementary districts and percentage Negro of *all* public school children residing in each district are shown on Map III-1. The number of Negro and white public school students in grades 5-8 residing in each of these districts is shown in Table III-1, and the number in grades 9-12 residing in each district is shown in Table III-2. To expedite use of the available information, the existing elementary districts were ordinarily retained as whole-unit building blocks in the middle school and Education Center districts, although in several instances an elementary district unit was divided between two or more of the recommended secondary districts. Changes in elementary districts will no doubt be made in the future, but such changes would not necessarily require adjustments in the proposed districts for the middle schools and Education Centers.

Each Education Center district for grades 9-12 is composed of three middle school districts serving grades 5-8. In general, attendance districts at both the middle school and Education Center levels are laid out as single geographical units. The single exception is one section of the Hill area to be assigned to the South II attendance district, and to the South A and B middle school districts contained within it.

As population shifts occur, the application of these guidelines may take a somewhat different form from that presented in this report. Different parts of a single middle school district may in some cases be included in different Education Center districts. Attendance districts of either middle schools or Education Centers may have to be split to assure racial integration in enrollments. Whatever adjustments may be required, it is important to understand that a basic premise underlying all districting policies is that the city of Pittsburgh is each child's school district in fact as well as theory.

Recommendation: Five school attendance districts should be created to serve all public school children in grades 9-12 in five new Education Centers.

Recommendation: Fifteen school attendance districts should be created to serve all public school children in grades 5-8 in three new middle schools to be constructed and twelve middle schools to be converted from existing secondary schools.[9]

Recommendation: Each secondary school attendance district should

a. utilize sites suitably located with respect to transportation and other community facilities and of suitable topography and land area for school purposes;

b. serve a racially integrated enrollment;

c. utilize a facility having sufficient capacity to meet projected public school enrollments and to provide for dual enrollment of children not regularly enrolled in the public schools.

Recommendation: In order to preserve the criteria stated above, secondary school attendance districts should be altered from time to time through adjustment of boundary lines, utilizing transportation where necessary and appropriate.

The particular school districts proposed are illustrated on Map III-2 and on the several individual district maps presented later in this chapter. Each of the five attendance districts for the Education Centers includes three middle school districts.

All five Education Centers and three of the fif-

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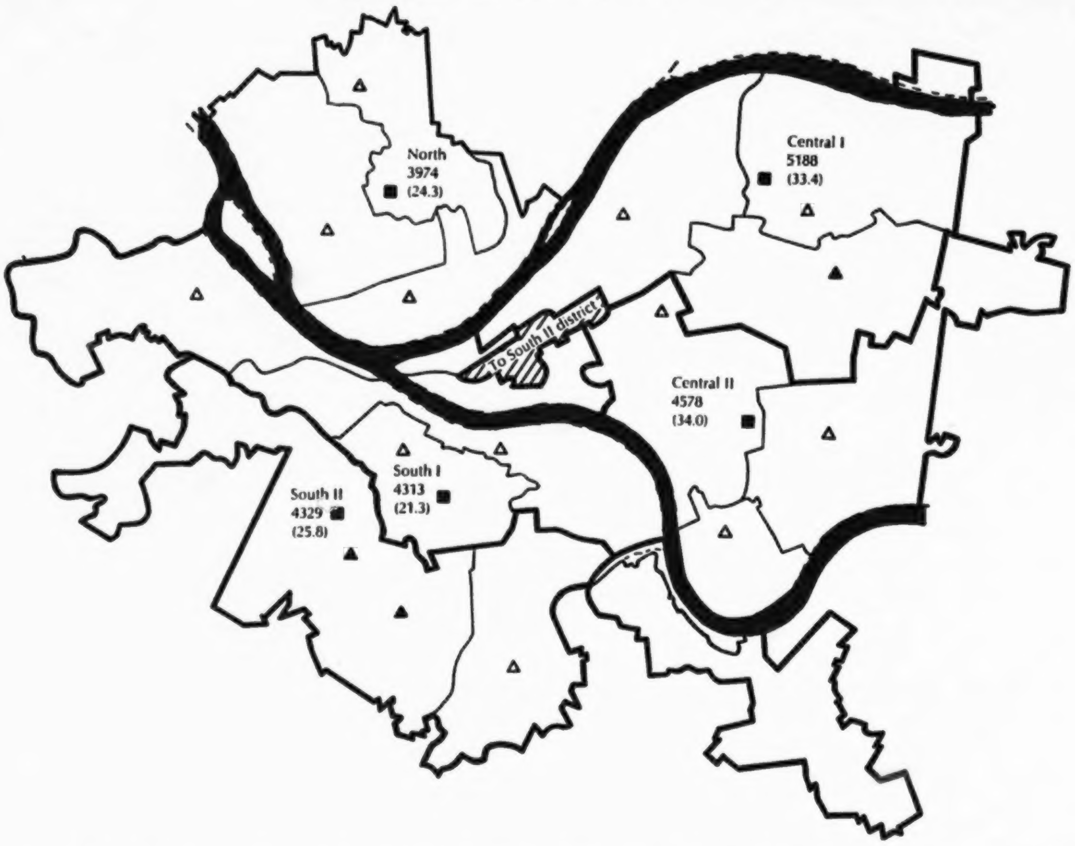
[9] As an alternative, the new middle schools designated as South A and South B would be combined into one large school appropriately divided into separate units. In this event, there would be fourteen rather than fifteen middle school districts. Because of the possibility of having a single large attendance area, the district boundary lines separating South A from South B have not been specified.

MAP III-2 **Districts for Education Centers and Middle Schools***



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■ Education Center**

▲ Middle schools (new construction)**

△ Middle schools (existing buildings)

*The figures in each district represent public school enrollment for grades 9-12 as of December, 1965. The number in parenthesis is the Negro percentage of enrollment in grades 9-12.

**Actual site not indicated.

teen middle schools shown on the map are to be newly constructed. The remaining twelve middle school districts will utilize existing secondary school buildings after completion of appropriate minor remodeling to adapt these buildings for use by lower grades and younger children.

On the basis of 1965-66 data, enrollments and racial composition (shown as Negro percentage of enrollments) for each of the proposed districts for grades 9-12 are shown on Map III-2. Tables III-3 and III-4 give the recommended capacities for all secondary facilities. Tables III-5 and III-6 show the present and estimated public school enrollments and racial compositions for each of the proposed Education Center and middle school districts.

(1) CAPACITIES. The capacities of the Education Centers vary from 4180 to 6440, and the middle schools from 963 to 2374. As pointed out earlier, these large schools and Centers should be organized in smaller units in order to preserve the identity of the individual student. In buildings to be newly constructed, this organization should be enhanced by constructing the buildings as complexes of smaller units. In the existing buildings which would be used as middle schools for a period of time, these smaller organizational units can be created at very little cost by making different floors or different sections of the building into distinct units and by providing separate offices for administration, guidance, and the like for each unit.

The recommended capacity, public school component and nonpublic school component, of each of the Education Centers is shown in Table III-3. Each of the Centers is large enough to carry out the education program and to accomplish racial integration. The Centers vary somewhat in size because the student population is not located evenly in all sections of the city, and physical and logistical restraints tend to inhibit equalization of enrollments at each center. Of course, the Centers must be large enough in total to hold the student enrollments which are forecast. The capacity figures for grades 9-12 include a special increment of 2000 spaces to provide for nonpublic school children who are expected to enroll in certain courses offered in the public schools on a part-time, dual-enrollment basis. Although these figures were derived after consultation with nonpublic school officials, they should be treated as rough estimates to be refined as more specific figures grow out of conversations between public and nonpublic school personnel. It should be pointed out that 2000 spaces make it possible for substantially more than that number of students to take courses on a part-time basis. For example, two students each enrolled for half of their time in Pittsburgh's public schools, or three students each enrolled for a third of their time, might require only one additional space. The precise equation of proportionate time and equivalent full-time space cannot be formulated without more detailed knowledge of the particular courses each nonpublic school student would be taking.

TABLE III - 3

Recommended Capacity of Education Centers for Pittsburgh

Center	*Public School Component**	*Nonpublic School Component** (Estimated Full-time Equivalent)*	*Recommended Capacity*
North	3,900	280	4,180
Central I	6,000	440	6,440
Central II	5,200	360	5,560
South I	5,200	480	5,680
South II	5,500	440	5,940
Total	25,800	2,000	27,800

* In each case, the public school component is based on the estimated public school enrollment in 1970-71 or 1975-76 (whichever is higher), as shown in Table III - 5.

** In this column, the total estimated part-time nonpublic school participation of the equivalent of 2,000 full-time students is divided in rough proportion to the distribution of nonpublic school students over the five school districts.

TABLE III - 4

Capacities and Estimated Enrollments for Recommended Middle Schools for Pittsburgh

School	*Estimated Maximum Enrollments**	*Estimated Enrollment in 1975-76*	*Rated or Recommended Capacity***
Allderdice	2,341	2,035	2,374
Allegheny	953	840	963
Arsenal	1,659	1,195	1,336
Carrick	1,190	1,087	1,400
Gladstone	971	900	1,046
Langley	1,447	1,111	1,180
Oliver	1,688	1,233	1,747
Peabody	2,140	1,711	2,040
Perry	1,159	1,159	1,049
Prospect	1,265	996	1,071
Schenley	1,244	1,029	1,633
South	1,351	1,229	1,353
New East	2,124	1,884	2,300***
New South (A and B)	3,155	2,768	3,600****
Total	22,745	19,240	23,092

* This figure is the higher of the 1970-71 and 1975-76 enrollment estimates in Table III - 6.

** In several cases the predicted maximum projected enrollment of a school (based on the high estimates, as shown on Table III - 6) is larger than the capacity of that school. In nearly every case, this maximum would be reached in 1970, but by 1975 the estimated enrollment would be well below capacity. As the building program recommended in this report would not be completed until sometime after 1970, this apparent tightness in some buildings will not be a problem. Moreover, any temporary crowding that did occur could easily be reduced by making slight adjustments in the attendance district lines. Finally, it should be noted that the capacities shown here were computed by the Harvard staff in a manner which would provide a generous amount of space for the number of students indicated. They are based on class sizes of 20, 25, or 30, depending on the size of the room, and upon an 80 per cent utilization of this per-class size.

*** Includes component of 100 full-time equivalent spaces for nonpublic school students.

**** Includes component of 400 full-time equivalent spaces for nonpublic school students.

The capacities of the middle schools are shown on Table III-4. The variation in these capacities is primarily a result of the different sizes of the existing school buildings which would be utilized. All are large enough to provide an adequate education program for grades 5-8. Through appropriate

TABLE III - 5

Current and Estimated Public School Enrollments and Racial Composition of Recommended Education Centers Districts, Grades 9-12, in Pittsburgh*

	1965-66				1970-71				1975-76			
School	*White*	*Negro*	*Total*	*Percentage Negro*	*White*	*Negro*	*Total*	*Percentage Negro*	*White*	*Negro*	*Total*	*Percentage Negro*
North	3,008	966	3,974	24.3	2,532	1,296	3,828	33.9	2,283	1,411	3,694	38.2
Central I	3,453	1,735	5,188	33.4	3,277	2,351	5,628	41.8	3,423	2,716	6,139	44.2
Central II	3,028	1,550	4,578	34.0	3,142	1,990	5,132	39.0	2,894	2,120	5,014	42.3
South I	3,394	919	4,313	21.3	3,426	1,499	4,925	30.4	3,451	1,674	5,125	32.7
South II	3,211	1,118	4,329	25.8	3,628	1,396	5,024	27.8	4,068	1,484	5,552	26.7
Total	16,094	6,288	22,382	28.1	16,005	8,532	24,537	34.8	16,119	9,405	25,524	36.8

* The figures used in this table correspond with those used to make the high estimates of Table II - 1. Although the most probable estimates represent a better guess as to future public school population, more flexibility for future growth is gained by using the high estimate as a base for future planning. The estimated enrollments (and percentages Negro) shown on this table do not include the part-time nonpublic school component recommended in this report.

assignment policies, racial integration can be facilitated in the particular combination of varying capacities and locations recommended. Except for those schools which will be newly constructed, Table III-4 shows no special increment in middle school capacity to provide for part-time enrollment of nonpublic school students. The recommended capacities of the three new middle schools were increased by a total of 500 in order to allow for new programs which would bring nonpublic school children into the middle schools on a part-time basis. As in the case of the Education Centers, these increases are only rough estimates which must be further refined. It should be noted, as Table III-4 reveals, that by 1975-76 the total middle school capacity would permit the use of a very substantial amount of space for these part-time programs. As information becomes more precise, it may well indicate that future construction at the middle school level after 1975 should include provision for a larger part-time component.

(2) RACIAL INTEGRATION. According to current data, the Negro percentage of enrollments for the proposed districts ranges from 21.3 per cent to 34.0 per cent for the Education Centers and 18.3 per cent to 55.0 per cent for the middle schools. As Tables III-5 and III-6 show, these ranges are not expected to vary greatly during the next ten years. The figures shown in the tables, and the range in percentages indicated above, do not reflect the substantial addition of part-time, nonpublic school students which is recommended in this report. As the overwhelming majority of these students will be white, the actual integration achieved during a significant part of each school day, particularly at the 9-12 grade level, would be considerably strengthened by this addition.

As can be seen from Table III-6, present estimates indicate that several middle school districts would be over 50 per cent nonwhite by 1975-76. Insofar as these estimates reflect a trend of net migration of white students out of Pittsburgh public schools, the quality integration which would be provided in the education plan recommended here should tend to reverse this trend and thus reduce the nonwhite percentage of these schools. Moreover, the percentage of nonwhites in middle school districts could be equalized at about, and in most cases below, 50 per cent by adjustments in the recommended redistricting. In some instances, such as New East, where the highest nonwhite percentage exists, a small geographic area

TABLE III - 6

Current and Estimated Public School Enrollments and Racial Composition of Recommended Middle School Districts, Grades 5-8, in Pittsburgh*

	1965-66				1970-71				1975-76			
School	*White*	*Negro*	*Total*	*Percent-age Negro*	*White*	*Negro*	*Total*	*Percent-age Negro*	*White*	*Negro*	*Total*	*Percent-age Negro*
Allderdice	1,262	1,215	2,477	49.1	1,079	1,262	2,341	53.9	1,049	986	2,035	48.5
Allegheny	630	381	1,011	37.7	550	403	953	42.3	458	382	840	45.5
Arsenal	761	507	1,268	40.0	937	722	1,659	43.5	655	540	1,195	45.2
Carrick	885	198	1,083	18.3	946	244	1,190	20.5	857	230	1,087	21.2
Gladstone	631	296	927	31.9	613	358	971	36.9	517	383	900	42.6
Langley	838	280	1,118	25.0	1,057	390	1,447	27.0	829	282	1,111	25.4
New East	924	1,129	2,053	55.0	867	1,257	2,124	59.2	681	1,203	1,884	63.8
New South (A and B)	1,694	1,211	2,905	41.7	1,939	1,216	3,155	38.5	1,644	1,124	2,768	40.6
Oliver	989	861	1,850	46.5	766	922	1,688	54.6	525	708	1,233	57.4
Peabody	1,048	852	1,900	44.8	1,117	1,023	2,140	47.8	803	908	1,711	53.1
Perry	762	195	957	20.4	824	260	1,084	24.0	884	275	1,159	23.7
Prospect	768	396	1,164	34.0	822	443	1,265	35.0	666	330	996	33.1
Schenley	753	652	1,405	46.4	607	637	1,244	51.2	495	597	1,092	54.7
South	735	533	1,268	42.0	724	627	1,351	46.4	565	664	1,229	54.0
Total	12,680	8,706	21,386	40.7	12,848	9,764	22,612	43.2	10,628	8,612	19,240	44.8

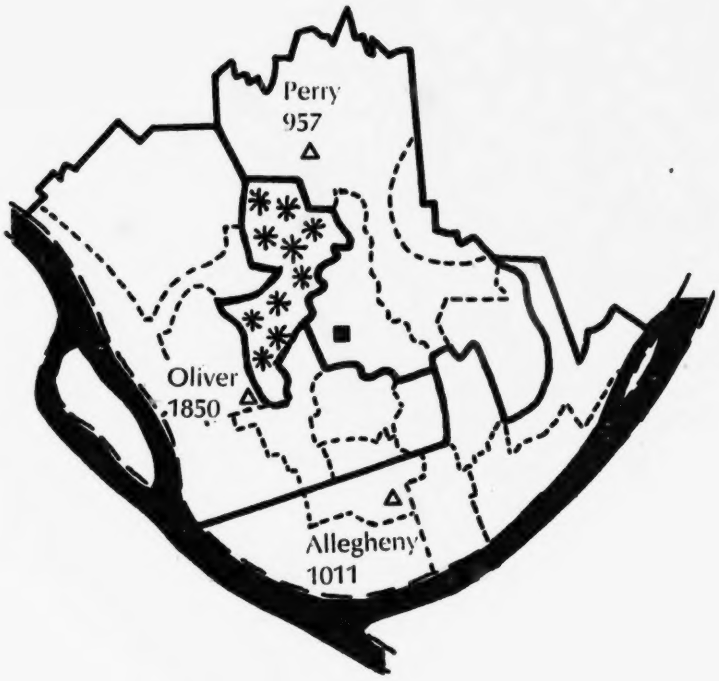
* The figures used in compiling this table correspond with those used to make the high estimate of Table II - 1. Although the most probable estimates represent a better guess as to future public school population, more flexibility for future growth is gained by using the high estimate as a base for future planning. The estimated enrollments (and percentages Negro) shown on this table do not include any part-time nonpublic school component.

should be assigned to a more remote district, such as Carrick, where there is space and a low non-white percentage. The actual number of students which would be affected by such a districting adjustment and the schools involved in the adjustment should be determined on the basis of current data at the time the districting plan is implemented. It is important, however, that the Board of Education establish a level of Negro percentage of enrollments, related to the city-wide average, above which it will not permit the Negro enrollments in any school to rise. Through such a policy the threat of "tipping" should be allayed and stability in schools and housing in the area preserved.

The Pittsburgh Board of Education should also encourage the establishment of a metropolitan school planning effort to deal, among other matters, with arranging for the voluntary transfer of students to suburban schools in Allegheny County. Even a very modest metropolitan plan in greater Pittsburgh would contribute substantially to the goal of integrated education in both Pittsburgh and the suburban areas. In several urban centers in the United States, including Boston, Massachusetts, Hartford, Connecticut, and Rochester, New York, metropolitan school programs have already been planned and are being implemented. In carrying out the plans in these other cities, financial support has been obtained under Title I and Title III of the Elementary and Secondary Education Act of 1965 and Title IV of the Civil Rights Act of 1964.

The following maps and accompanying discussions present a brief summary of the preceding proposals as they apply to the attendance district of each of the five proposed Education Centers, and to the middle school districts included in each.

NORTH DISTRICT



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■ Education Center*

▲ New middle schools*

△ Middle schools (existing buildings)

✱ Parks and cemeteries
not within existing school districts

--- Elementary school districts

—— Middle school districts

Location of North District

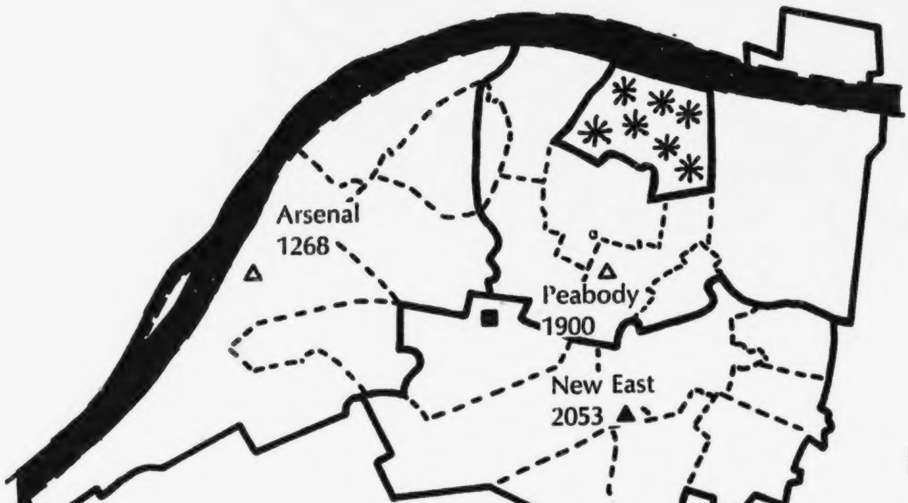
The figures in each district represent public school enrollment for grades 5-8 as of December, 1965.

The North District includes the entire north side of Pittsburgh. This is the only district of the city in which an immediate decline in enrollments is anticipated at both the 5-8 and 9-12 levels. The new Education Center should be constructed with a capacity of 4180. The racial composition of the present enrollment for grades 9-12 in the district is 75.7 per cent white and 24.3 per cent nonwhite.

It will be possible to house the middle school population comfortably in the present Allegheny, Oliver, and Perry High Schools. As middle schools in the proposed districts today, these schools would have Negro enrollments of 37.7 per cent, 46.5 per cent, and 20.4 per cent respectively.

* Actual site not indicated

CENTRAL I DISTRICT



Legend

■ Education Center*

▲ New middle schools*

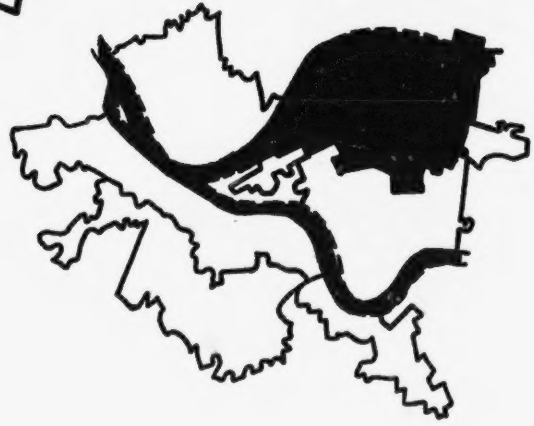
△ Middle schools (existing buildings)

❋ Parks and cemeteries
not within existing school districts

--- Elementary school districts

▬ Middle school districts

Location of Central I District



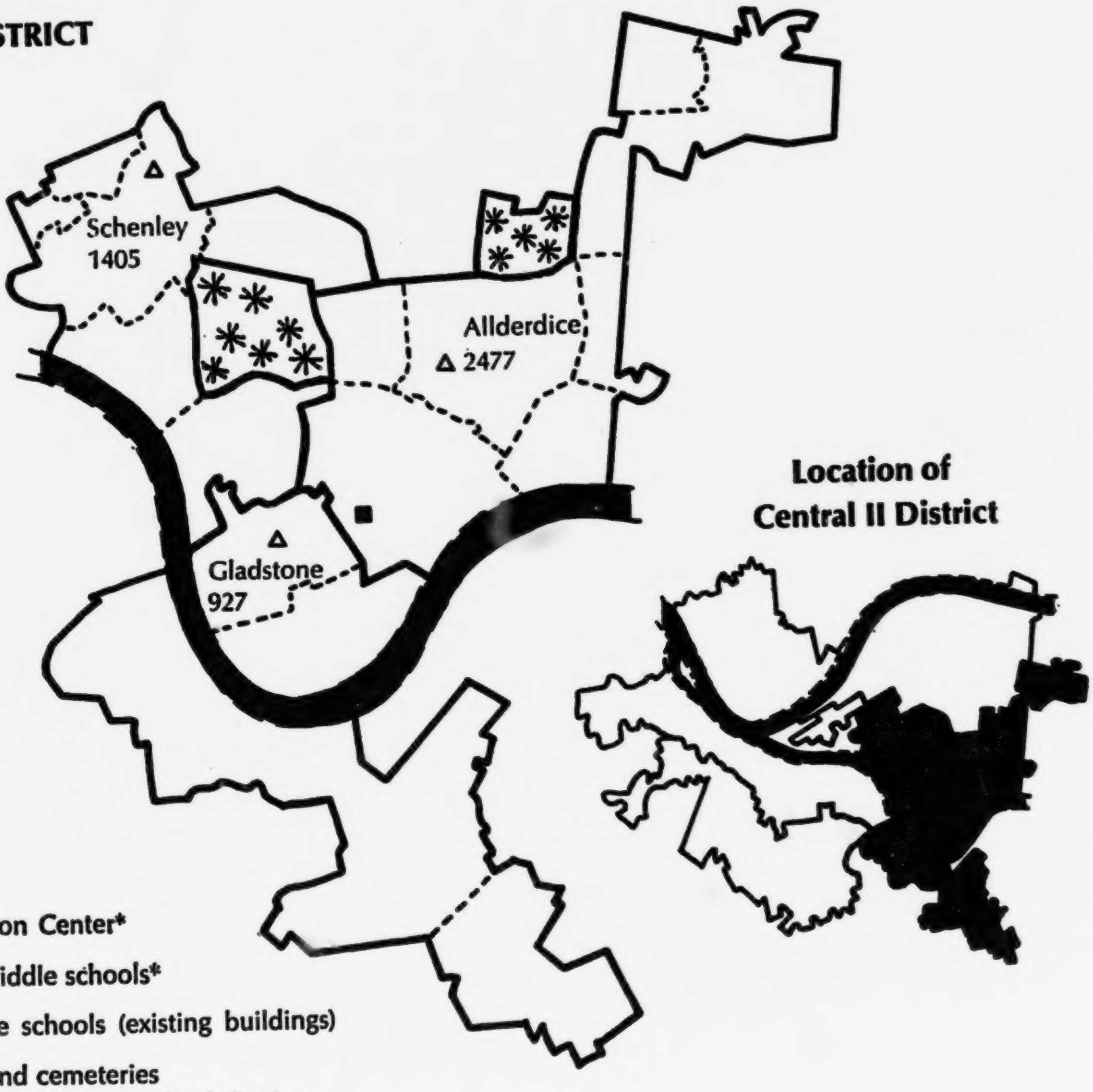
The figures in each district represent public school enrollment for grades 5-8 as of December, 1965.

Central I is one of two districts located in the east end of Pittsburgh between the Allegheny and Monongahela Rivers. Because of expected population growth in this district, particularly in the East Liberty area, enrollments at both the 5-8 and 9-12 grade levels are expected to increase over the short term and then taper off again sometime after 1970. The new Education Center should be constructed with a capacity of 6440. The racial composition of the present enrollment for grades 9-12 in this district is 66.6 per cent white and 33.4 per cent nonwhite.

It will be possible to house the middle school population in the present Arsenal and Peabody High Schools and a middle school for 2300 students to be constructed in the area designated as New East. As middle schools in the proposed districts today, these schools would have Negro enrollments of 40.0 per cent, 44.8 per cent, and 55.0 per cent respectively. As has been noted previously, a moderate number of assignments should be made from this last area to other parts of the city, in order to reduce the Negro enrollments to below 50 per cent. Washington Vocational and Westinghouse would be discontinued as secondary schools.

* Actual site not indicated

CENTRAL II DISTRICT



Legend

■	Education Center*
▲	New middle schools*
△	Middle schools (existing buildings)
✱	Parks and cemeteries not within existing school districts
---	Elementary school districts
—	Middle school districts

The figures in each district represent public school enrollment for grades 5-8 as of December, 1965.

The Central II District serves the southern part of the east end of Pittsburgh. The district extends across the river into the Hays-Mifflin section of the south side and includes both the Baxter and Crescent Elementary School Districts. A generally declining enrollment pattern is projected for the district over the next ten years. The only enrollment increase is expected at the 9-12 grade level, and that gain should level off by 1970. The new Education Center should be constructed with a capacity of 5560. The racial composition of the present enrollment for grades 9-12 in this district is 66.0 per cent white and 34.0 per cent nonwhite.

It will be possible to house the middle school population in the present Allderdice, Gladstone, and Schenley High Schools with an integrated student population in each. As middle schools in the proposed districts today, these schools would have Negro enrollments of 49.1 per cent, 31.9 per cent, and 46.4 per cent respectively. Herron Hill, on the border between Central I and Central II, would be discontinued as a secondary school.

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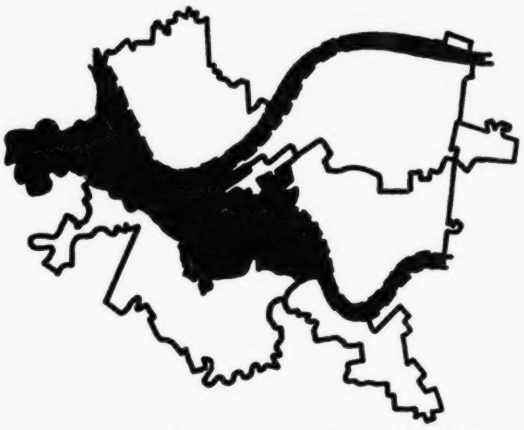
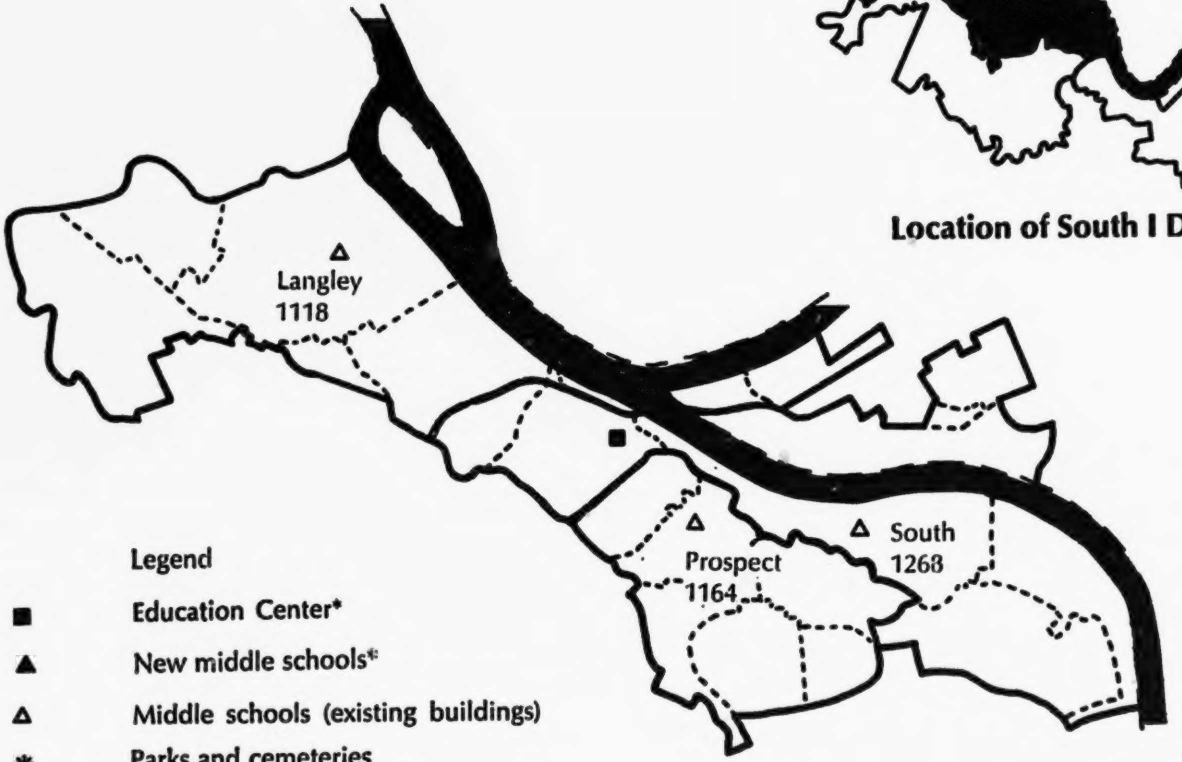
* Actual site not indicated

SOUTH I DISTRICT



Location of South I District



Legend

■ Education Center*

▲ New middle schools*

△ Middle schools (existing buildings)

❋ Parks and cemeteries
not within existing school districts

--- Elementary school districts

—— Middle school districts

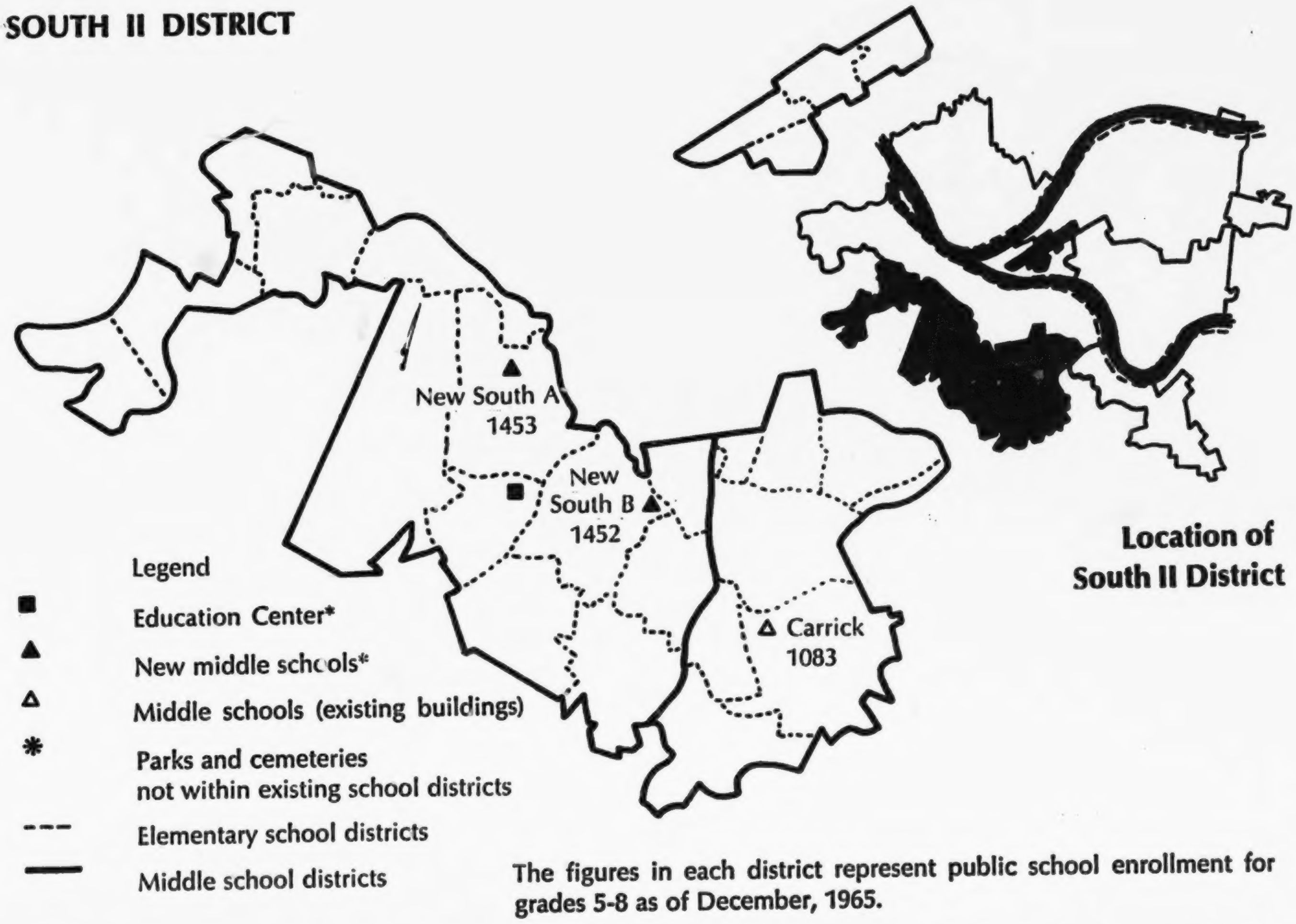
The figures in each district represent public school enrollment for grades 5-8 as of December, 1965.

In addition to the west end of the city and approximately half the section of Pittsburgh south of the Monongahela River, the South I District also includes most of the Forbes and Weil Elementary School Districts from the Hill section of Pittsburgh. Overall, this district can expect a steady increase in enrollment at both the 5-8 and 9-12 grade levels over the next five to ten years, followed by a gradual decline in the late 1970's. The increase of the next few years will probably be concentrated in the Langley District of the west end. Certain sections of the lower south side can be expected to lose school enrollments as a result of continued renewal and clearance. The new Education Center should be constructed with a capacity of 5680. The racial composition of the present enrollment for grades 9-12 in this district is 78.7 per cent white and 21.3 per cent nonwhite.

It will be possible to house the middle school population in the South I District in the present Prospect Junior High School and Langley and South High Schools. As middle schools in the proposed districts today, these schools would have Negro enrollments of 34 per cent, 25 per cent, and 42 per cent respectively. South Hills and Fifth Avenue would be discontinued as secondary schools.

* Actual site not indicated

SOUTH II DISTRICT


New South A
1453
New South B
1452
Carrick
1083
Location of South II District
Legend
■ Education Center*
▲ New middle schools*
△ Middle schools (existing buildings)
✱ Parks and cemeteries not within existing school districts
--- Elementary school districts
— Middle school districts

The figures in each district represent public school enrollment for grades 5-8 as of December, 1965.

The South II District encompasses all of the southernmost part of Pittsburgh and a large part of the lower and middle Hill sections of the city. Students from the Hill would be provided with transportation which would give them rapid access to the south side. The total South II District will show a substantial increase in enrollments—particularly at the high school level—over the next few years despite an expected drop in enrollments in the Hill area. The new Education Center will be constructed with a capacity of 5940. The racial composition of the present enrollment for grades 9-12 in this district is 74.2 per cent white and 25.8 per cent nonwhite.

In addition to the Education Center, two new middle schools for 1800 students each should be constructed in this district. The remaining middle school enrollment in the South II District would be housed in Carrick High School. As middle schools in the proposed districts today, Carrick would have a Negro enrollment of 18.3 per cent and each of the proposed new schools should have Negro percentages of 41.7 per cent. Although the separate districts have not been specified for New South A and New South B, each would draw enrollments from one-half of the Hill area and one-half of the south side area which is included in South II outside the Carrick middle school district. As an alternative one large new middle school appropriately divided into separate units might serve all of the students in the New South A and B districts.

* Actual site not indicated

D. Elementary schools

The elementary schools in Pittsburgh have not been the focus of this study, and detailed recommendations concerning them will not be made in this report. But they are obviously affected by the recommendations made here. Although this impact was considered by the Harvard staff, more detailed study of the lower grades should be conducted. In particular, such a study should concentrate on the best utilization of the space made available as a result of the construction of nearly 34,000 new school spaces in Pittsburgh.

> **Recommendation:** A study of existing elementary school buildings should be conducted to establish Pittsburgh's priorities for the use of space made available through construction at the secondary level.

In carrying out such a study, the following uses of elementary school space merit particular attention:

(1) ABANDONMENT OF BUILDINGS. The Harvard staff has examined only those elementary buildings which also house a secondary school program above the eighth grade and, therefore, it cannot recommend a plan of abandonment for elementary school buildings. It is clear, however, that certain buildings which were examined and are not recommended for use as secondary schools—such as Conroy Junior High School—should be abandoned as soon as possible. Moreover, the Pittsburgh school department has caused all elementary buildings to be evaluated in the past, and the school department records indicate that many of them are old, in poor physical condition, or lacking in educational facilities such as libraries, gymnasiums and auditoriums. Although no independent evaluation has been undertaken by the Harvard staff, the extensive list of buildings having defects according to these records indicates that substantial numbers of abandonments may be in order. There are, in addition, several very small buildings in which it is doubtful that a modern educational program can be adequately and economically provided.

(2) REDISTRICTING TO BRING ABOUT RACIAL INTEGRATION. Because Pittsburgh's Negro residential areas are not concentrated in one very large section, racial integration at the elementary level should be easier to obtain than is often the case in large cities. The possibility of such redistricting at the elementary level, before the completion of the building program recommended in this report, should be carefully and systematically explored. Nevertheless, at the present time, the small size and the unfavorable location of many of the elementary schools restricts redistricting opportunities. In the long run, if existing housing patterns are not sharply altered, the replacement of the present elementary buildings with much larger schools may be required to realize the maximum possibilities for integration for the youngest children in the system. Without any new construction at this level, however, the implementation of the educational plan contained in this report would create a substantial amount of additional space in existing elementary school buildings. This space might be used to enlarge attendance areas and hence, through appropriate redistricting, to draw more integrated enrollments at the PK-4 level. Although the larger districts would generally be within walking distance for the students, some transportation might have to be provided where the walking distances were long or difficult for the younger children.

(3) ABANDONMENT OF BUILDINGS AND REASSIGNMENT OF STUDENTS. The two previous suggestions might also be combined. In some instances, it might be possible to abandon one school and to utilize a second school to serve the former attendance districts of the two schools. For example, if Conroy were abandoned, the children in grades PK-4 from the present Conroy and McNaugher districts might be assigned to McNaugher. As these two districts are not contiguous, transportation would have to be provided in this example. In other instances, where contiguous districts were involved, with little or no transportation two or more schools might provide space on an integrated basis for students previously assigned to the abandoned school.

(4) EXPANSION OF PREKINDERGARTEN PROGRAM. Some of the additional space made available in the system by the construction of new schools might be used for the expansion of Pittsburgh's preschool program.

(5) UTILIZATION AS ADULT CENTER. Some of the space could be utilized for neighborhood adult centers for such services as basic literacy

TABLE III - 7

Cost Estimates of New Secondary Facilities for Pittsburgh

Project	*Land**	*Construction***	*Total Cost*	*Estimated State Aid****	*Total Cost After Deducting Estimated State Aid*****
North	$ 1,158,000	$12,540,000	$ 13,698,000	$ 6,117,500	$ 7,580,500
Central I	4,034,000	19,320,000	23,354,000	10,550,000	12,804,000
New East	2,520,000	5,980,000	8,500,000	3,502,000	4,997,500
Central II	400,000	16,680,000	17,080,000	7,567,000	9,513,000
South I	3,760,000	17,040,000	20,800,000	9,406,000	11,394,000
South II	325,000	17,820,000	18,145,000	8,033,000	10,112,000
New South A	*****	4,680,000	4,680,000	1,755,000	2,925,000
New South B	*****	4,680,000	4,680,000	1,755,000	2,925,000
Total	$12,197,000	$98,740,000	$110,937,000	$48,686,000	$62,251,000

* The figures in this column include the estimated cost of acquisition of property and its preparation for construction in the respective districts.

** These figures are based on average costs for urban schools of the general type envisioned. The specific figures used were $3000 per student for the five Education Centers and $2600 per student for the three middle schools.

*** State aid is computed as 50 per cent of state allowable expenses. Allowable expenses included were construction costs of $1600 and $2300 per student for Grades 5-6 and 7-12, respectively, and all land costs. An additional $700 per student is included for one-half the enrollment in each Education Center. This latter amount is included to account for the slightly higher state reimbursement for vocational programs.

**** This figure can be reduced somewhat by federal financial assistance in the purchase of equipment, and it may be significantly reduced by federal construction aid which is provided in pending legislation.

***** No figure is included because cost of land for this school is included in South II land costs or necessary acreage is already under public ownership.

training, enrichment courses, health clinics, and retraining for changing opportunities.

(6) CREATION OF SUPPLEMENTARY CENTERS IN BUILDINGS PREVIOUSLY USED AS ELEMENTARY SCHOOLS. Supplementary centers could be utilized by children from both PK-4 and 5-8 schools for such special programs as reading clinics, remedial services, and pilot programs. Centers might be used, also, to assure the availability of racially integrated experiences under favorable conditions for children in these early school years. For example, if there remain nearly all-white or nearly all-Negro schools at this time, children from such schools could be brought frequently to these supplementary centers for common play, work, or projects. In addition, full-time racially integrated classes beginning with kindergarten and composed of children from various parts of the city might be held in the supplementary facility. Such classes could be highly innovative and could be conducted with a view to providing models for other classes. Similarly, the centers might be used for innovative and exemplary cooperation with the nonpublic schools. For example, part-time enrollment in the model integrated classes by children regularly enrolled in nonpublic schools might be encouraged.

(7) EXPANSION OF THE ELEMENTARY PROGRAM. Many of the supplementary services and special programs mentioned above—such as remedial reading or in-service training—could be provided in the space available in each individual school, rather than in a separate supplementary center location.

E. The cost of the construction program

The total estimated cost of the construction program recommended in this report is $110,937,000. This figure includes the estimated cost of buildings and the cost of acquiring land. As shown in Table III-7, the net cost to Pittsburgh, after deducting standard state construction allowances and assuming no assistance from the federal government, would be approximately $62,000,000.

No estimated changes in operating expenses are included here, as they cannot be calculated until the general guidelines included in this report take on a more definitive shape. Estimates can be made of transportation costs, however. It can be assumed that transportation would be provided all students in grades 9-12 living more than two miles from their assigned school, all students in grades 5-8 living more than one and one-half miles from their assigned school, and all students who would cross a river to their assigned school. On these assumptions, approximately 27,000 students would receive transportation in 1970 and approximately 25,600 in 1975. At an estimated annual cost of $40 per pupil, the transportation costs would amount to about $1,080,000 in 1970 and $1,024,000 in 1975. Assuming state reimbursement of 21 per cent of transportation costs,[9a] Pittsburgh's share of the total costs would be reduced to approximately $853,200 in 1970 and $808,960 in 1975. By 1975 the cost of transportation under the recommended plan for grades 5 through 12 would amount to approximately 2 per cent of an operating budget of $40 million.[10] The $40 per student figure is based on the *lowest* of present costs under private contract. Under other private contracting arrangements and under arrangements for use of public transportation the costs are higher, with a high of $80 per pupil for children over 12 years old using public transportation. At an intermediate figure of $60 per student, the cost to Pittsburgh would be approximately $1,279,800 in 1970 and $1,213,440 in 1975, about 3 per cent of a 1975 budget of $40 million. From the greater volume of transportation required by the recommendations in this report, considerable economies and thus lower costs should result. It is particularly important that the high cost of public transportation for school children be reduced in order to facilitate these recommendations. The figures shown here do not include nonpublic school students or special students below fifth grade, who would be transported in any event. Of course, they do include some students in grades 5 through 12 who would be transported under present districting and assignment patterns.

Apart from transportation costs, there would be a general increase in operating expenses to provide a greater amount and variety of part-time public education for nonpublic school students. The use of community facilities might entail certain increases and decreases in operating costs. For example, there might be employment of additional "teachers," including engineers, lawyers, scientists, artists, in many cases at higher salaries. But costs would be lowered because utilization of the services and facilities of the community at large would reduce the demand on school facilities and school personnel. Moreover, the salaries of part-time community teachers and services would ordinarily be shared in important respects by other private and public agencies. The addition of eight new buildings would produce additional maintenance costs. But at the same time, maintainance costs would be reduced through the elimination of several of the oldest and most expensive-to-maintain buildings.

The construction costs shown on Table III-7 are necessarily rough estimates because the buildings which this report proposes for construction have no very similar models from which more accurate figures could be taken. Moreover, the materials and services which account for building and land costs are subject to change with variations in the cost of labor and materials, fluctuating land values, and choice of materials and building techniques.

Building cost estimates are based on $3000 per pupil for grades 9-12 and $2600 for grades 5-8. These figures were derived after examination of comparative costs of urban school construction.

The land value estimates are based on a cross section of values obtained from the Pittsburgh City Planning Department, and a cross section of present land uses on the acreage needed. It is assumed that developed land can be obtained and prepared for construction at a total cost of two and one half times its present assessed valuation. Land which has not been developed has been valued at current market value. The total acreage used in arriving at the costs was based on estimates of the acreage required and estimated to be available in each of the five Education Center districts.

[9a] According to Pittsburgh Public School estimates, 21% replaces 39% as a result of legislation effective after 1965.

[10] Actually, by 1975 the operating budget can be expected to be considerably higher and thus the portion of the budget allocated to transportation would be considerably smaller.

The gross total costs were obtained by adding the construction costs to the land costs. Pittsburgh would have to provide bonding for these total costs. Interest, not shown in the table, would be paid on the outstanding amount of the bonds. The cost to the city of amortizing principal over the life of the bonds would be reduced by the receipt of state aid for school construction.

The state reimbursement figure is based on a straight 50 per cent of all land costs and 50 per cent of allowable per pupil costs, as of July 1, 1966, of $2300 for grades 7-12 and $1600 for grades 5-6.

At present bonding ceilings, the Pittsburgh Board of Education would be able to finance approximately $60,000,000 of the total recommended building program through general obligation bonds. Unless possible federal or other outside assistance were found, construction costs beyond that amount would probably have to be financed through the State Public Building Authority. At present this would mean slightly higher rates of borrowing.

Although the proposed building program entails very substantial borrowing by the Board of Education and a very heavy investment by the people of Pittsburgh, it is not a conventional building program, and one should not assume that it need be financed entirely through conventional means. Legislation which would provide general federal school-construction aid, amounting to possibly 4 million dollars per year for Pittsburgh, has been under active consideration in recent years.[11] The educational plan recommended in this report is a perfect example of the city-wide cooperative effort which is contemplated in President Johnson's proposed Demonstration Cities program.[12] The legislation filed to enact that program would include federal financial assistance for school construction which was part of a Demonstration Cities project. For the novel program proposed, there is a possibility also of significant foundation assistance.

In addition, a substantial credit could be obtained toward the local share of urban renewal costs if the school construction is coordinated with urban renewal planning as recommended in this report. This credit is not a cash-in-hand payment to the Board of Education, but a figure which increases the amount of urban renewal funding available through the federal government. In some instances, existing federal legislation contains provisions under which present appropriations might be used for school construction.[13] Moreover, for the special equipment other than the buildings themselves, there is potential federal funding under various existing federal laws.[14] For example, the cost of providing television facilities could possibly be covered in substantial part by funds appropriated under these statutes.

A phased schedule of building is not included in this report, as it is considered a central part of the recommendations that all buildings be begun as early as possible. Naturally, construction on eight sites might not begin simultaneously. A variety of factors, such as land acquisition, preparation of architectural plans, and development of educational program, will affect the several starting dates, but it is not assumed here that financing is one of these factors.

If financing limitations become decisive, however, priorities would have to be established. On the basis of present overcrowding and segregation, Central I should have top priority. For the same reasons, and also because of the growing population and the lack of secondary facilities in the area, South II should have second priority. The North Side should have third priority because of the segregation which exists there and because of the urban renewal and community college planning already being conducted in that area.

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[11] H. R. 9948, 89th Congress, 1st Session (1965).

[12] H. R. Doc. No. 368, 89th Congress, 2d Session (1966).

[13] E.g., Elementary and Secondary Education Act of 1965 Title I; Vocational Education Act of 1963.

[14] E.g., Elementary and Secondary Education Act of 1965, Title III; National Defense Education Act, Titles III & VII.

IV: Toward educational change in Pittsburgh

The assignment of the Harvard staff, and thus the focus of this report, has been the development of long-range educational plans for Pittsburgh. This brief concluding chapter acknowledges the obvious fact that the success of any long-range plan will depend very much on what is done in the immediate future.

The problem of school segregation, which was central in prompting the present study, is not a problem which can be tabled until a substantial building program is carried out. The cry of "Freedom Now!" may appear unreasonable to some, but more than a hundred years of history show that "reasonable" approaches usually mean substantial postponement.

By taking the initiative in dealing with the problem of school segregation, the Pittsburgh Public School System has demonstrated its determination not to postpone. As evidence of this determination, the Harvard staff was engaged to bring "objectivity and detachment" to the Board of Education's efforts to provide integrated education. Apart from this study, the Board has undertaken to provide textbooks that would reflect a realistic multi-racial picture of urban life; it has undertaken, in its recruiting, hiring, and promotion of personnel, to increase the number of Negroes in teaching and administrative-supervisory positions; it has, through its voluntary-transfer plan, brought about an improvement in the integration of a limited number of Negro and white students. The Board has also improved the racial balance of its schools by limited changes in existing school attendance district lines.[1] Liberty school (with an enrollment which is approximately 25 per cent Negro) has been selected as a pilot project to demonstrate that educational excellence can be developed in an integrated school.[2] Where additional integrated schools (including schools which have a higher Negro per cent of enrollment than Liberty) can be created by feasible adjustments in assignment patterns, additional models should be added pending the more general improvement of integration and quality education, which the massive building program described in this report should make possible.

Even while these temporary measures are continued and advanced, the main focus must be on the more permanent solutions which can be provided only through the greater capacities and improved facilities of the education plan recommended in this report. The recommendations made here have very broad implications for every section of Pittsburgh and every member of its population. These recommendations rely upon a major collaborative effort by the Pittsburgh Board of Education and many other public and private institutions in Pittsburgh. The success of the recommended plan is significantly dependent upon the completion of the proposed transportation system, upon the implementation of urban renewal plans, and upon the cooperation of private and public organizations in planning the education program throughout the community.

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[1] *The Quest for Racial Equality*, p. 25.

[2] *The Quest for Racial Equality . . . A Year Later* (Brochure Supplement, May 1966, to The Annual Report for 1965, Board of Public Education, Pittsburgh, Pennsylvania), p. 8.

In all of these areas it is important that the Board of Education assume an initiating and policy-influencing role which goes beyond a conventional view of the boundaries of education. In all of these areas, too, other public and private agencies in the city should have a hand in shaping education policy. The recommendations of this report necessitate also unprecedented joint planning and cooperation with the nonpublic school system.

This highly complex, cooperative endeavor for education in Pittsburgh will require an unusually large measure of time and energy from the school department and from other key sources in Pittsburgh. It will require solid support from people in all sectors of Pittsburgh's life. Obtaining this support will involve an extended exchange of information and ideas between the school department and the city at large. Formalizing the active involvement of citizen groups and interested parties will facilitate such a community dialogue. The following formal arrangements might well be included.

1. A city-wide council advisory to the Board of Education, composed of representatives from labor, business, various racial and religious groups, higher education, the school administration and teaching and guidance staffs, the nonpublic schools, civil rights organizations, the Pittsburgh Council on Public Education, the Allegheny Conference, the Mayor's office and other public agencies which have interests relevant to educational planning, and the several neighborhood councils.
2. A separate neighborhood council for each Education Center, advisory to the city-wide council, to be composed of representatives of various sections and organizations located within each Center's attendance area.
3. A committee of public school and nonpublic school personnel, reporting to the superintendent of the public schools, and composed of representatives of the public schools and of the various separate parts of the nonpublic schools, to coordinate educational program and construction planning so as to take into account the interrelated needs of the several school communities.
4. A metropolitan council, composed of representatives from the boards of education of Pittsburgh and her surrounding communities, to begin discussion of cooperative ventures in education.

In the concluding comment in its 1965 Annual Report, the Board of Education stated:

> At this time there is no unified city-wide mechanism for the concerted attack on racial segregation. All parties, concerned with their own field, are acting separately and without overall, unified direction. We in the Board of Education declare that we are prepared to join with other responsible agencies, public or private, under a central system of city-wide associations for the work of desegregating the Negro families of Pittsburgh. We cannot do it alone.[8]

This report, in effect, extends that statement to apply to all of education. The Board cannot provide a first class, modern, fully integrated education program alone. The community-wide cooperative commitment described in this report will be necessary to provide the quality of education and the quality of life in the city which Pittsburgh must secure for the future.

[8] *The Quest for Racial Equality*, p. 46.

Appendix A

Methodology used in enrollment estimates

This report uses a slightly modified percentage of survival technique in making both the high and most probable estimates of Pittsburgh's future public school enrollments. The modified technique differs from the standard percentage-survival method in that it is applied on a subarea basis and maintains an option to adjust for the type of dramatic enrollment shift caused by an urban renewal project or a large housing development. The reader should remain aware of the following limitations inherent in the process of enrollment forecasting.

First, any method of population forecasting requires an analysis of trends over the most recent past. Quite often, as was the case in Pittsburgh, the methodology itself must be adjusted to make use of the available enrollment records. Because school records were available on the basis of public elementary school districts rather than by census tracts or some other small, fixed geographical unit, the elementary district, or various combinations of contiguous elementary districts, formed the basic unit for all estimates. Also, the percentage of survival method itself was selected over any of the multi-variable projection models because such factors as net migration for the total population and enrollments in nonpublic schools were not available on the basis of any common geographic unit.

Second, because of the uncertainty involved in any procedure which takes the recent past as an indicator of future patterns of population change, all estimates must be updated on a yearly basis and particularly at such time as final planning is made on any given facility or program.

For example, it was assumed that the recent trend of replacing low cost housing with apartment houses attractive primarily to childless families would not continue over the next decade. If this assumption proves incorrect, some of the estimates of school enrollment will have to be revised downward. Such alterations of the present estimates can be made on the basis of annual birth records and survival rates, both of which are available to school personnel.

The particular estimating procedure used in this report prompts an important suggestion. The school system should adopt, as rapidly as possible, a computerized system of record keeping which locates students on a much smaller and less changeable geographical base than the elementary school district. Such a system will vastly simplify the tasks of updating enrollment estimates and of assessing implications of proposed changes in districting patterns.

The estimating methodology employed for purposes of this particular report can best be explained by analyzing four of its aspects—birth trends, survival patterns, known alterations in survival trends, and trends in racial composition. Following the explanation of each of these aspects, the estimating procedures will be illustrated for a single elementary district.

TABLE A-1

Resident Births in Pittsburgh School District 1958-64

Year	Pitts-burgh	Mt. Oliver	Total Pittsburgh School District	Negro*	Percent-age Negro
1958	13,643	146	13,789	2,771	20.1
1959	13,111	159	13,270	2,801	21.1
1960	12,677	124	12,801	2,908	22.7
1961	12,197	136	12,333	2,913	23.6
1962	11,286	103	11,389	2,890	25.4
1963	10,060	121	10,181	2,675	26.3
1964	10,362	91	10,453	2,831	27.1

Source: Birth Records of the Allegheny County Health Department.

* Sufficient information on racial distribution of Mt. Oliver births was not available. Hence, for purposes of these calculations all Mt. Oliver births were regarded as white.

TABLE A-2

Resident Births (1958-1960) and Public School Enrollments (1960-1965) in Pittsburgh*

Year	Number of Births	Public School Enrollments by Grade Level K	1	2	3	4	5	6
1958	13,789							
1959	13,270							
1960	12,801	8,382	7,139	5,642	5,659	5,586	5,099	4,955
1961		8,537	7,134	5,872	5,531	5,425	5,386	4,820
1962		8,709	7,288	5,737	5,678	5,352	5,292	5,161
1963		8,693	7,524	5,767	5,402	5,512	5,241	5,010
1964		8,362	7,411	5,997	5,404	5,318	5,261	4,930
1965		8,215	7,295	5,883	5,584	5,324	5,134	5,063

* Birth data are based on the calendar year total, but enrollments are based on September 30 figures for the indicated year.

ANALYSIS OF BIRTH DATA The resident births in the Pittsburgh School District have decreased substantially during the six years between 1958 and 1964. The figures shown in Table A-1 show this drop in births on a yearly basis. The drop in resident births is apparently due to a decline in the actual birth rates (births per thousand women) and to the decrease in the number of women living in the city who are of childbearing age.

The first step in analyzing the birth figures for purposes of enrollment estimation involved an attempt to distribute the births, shown on Table A-1, to the various elementary school districts throughout the city. This distribution was done by using birth data by census tract, obtained from the Allegheny County Health Department, and a set of conversions (based upon 1960 housing distribution) supplied by Pittsburgh's Department of City Planning. This procedure resulted in an estimate of resident births by elementary school district for each year of the period 1958-1964. (The details of this distribution of births are not included in this report, but the data have been given to the Pittsburgh Public Schools.)

The first step provided a close estimate of resident births from 1958 to the present for each of the elementary school districts of Pittsburgh. The next step involved the use of this data along with school enrollment records to assess past survival rates and then to use these past survival rates to estimate secondary school enrollment over the next ten years. In this regard, it is important to note that children born in 1965 are likely to enter grade 5 in 1975. Hence, any attempt to estimate secondary school enrollments in the post-1975 period (or elementary school enrollments in the 1970-75 period) is an even more speculative procedure. Any such attempt actually requires more refined data on birth rates and a more extensive analysis of female migration than was permitted within the scope of the present study. Therefore, projections have been made only through 1975.

ANALYSIS OF SURVIVAL PATTERNS The concept of survival patterns by grade level refers to the relationship between the number of students in one grade in year Y to the number of students in the following grade in year Y+1. The critical assumption involved in using the percentage of survival model to forecast school enrollments is that a somewhat fixed pattern of survival rates for the various grades does, in fact, exist; that is, that over a series of years the percentage of students in one grade surviving to the next grade in

TABLE A-3

Per Cent Survival Ratios from Birth Through Grade 6 in Pittsburgh

Years	*B-K*	*Years*	*K-1*	*1-2*	*2-3*	*3-4*	*4-5*	*5-6*
1958-1963	.6305	1960-61	.8511	.8255	.9803	.9586	.9642	.9453
1959-1964	.6301	1961-62	.8537	.8042	.9670	.9676	.9755	.9582
1960-1965	.6418	1962-63	.8639	.7913	.9416	.9708	.9793	.9467
		1963-64	.8525	.7970	.9371	.9845	.9545	.9407
		1964-65	.8724	.7938	.9311	.9582	.9654	.9624
5-Yr. Average	——	5-Yr. Average	.8587	.8018	.9514	.9733	.9678	.9506
3-Yr. Average	.6341	3-Yr. Average	.8630	.7941	.9366	.9801	.9664	.9499
2-Yr. Average	.6360	2-Yr. Average	.8625	.7954	.9341	.9848	.9599	.9515
3-Yr. Weighted Average	.6360	3-Yr. Weighted Average	.8644	.7945	.9349	.9825	.9641	.9525

the following year is fairly constant. If one is speaking of a relatively stable community, the validity of this assumption seems justifiable since the percentage of survival represents the composite effect of such factors as rate of change in nonpublic school enrollment, migration of school-age youngsters, and school retention and dropout rates. On the other hand, no such assurance of long-term stability can be made in a community like Pittsburgh where a particular urban renewal or public housing project can have a disproportionate effect in a given year or series of years. For this reason, the methodology used in applying the percentage of survival technique in Pittsburgh was altered whenever renewal and housing developments were known to have an effect upon the data in question. This alteration in methodology is particularly important in estimating enrollments in the various geographical subsections of the city and will be mentioned again in later sections of this explanation.

Using the birth data by elementary school district, mentioned earlier, and detailed elementary school enrollment figures for the past five years, the staff computed grade-by-grade and year-by-year survival rates from birth through grade 6 for each elementary school district in the city. Electronic data processing methods facilitated computation of survival rates for numerous combinations of elementary districts and calculations of survival rate averages over the last five years, the last three years, and the last two years. The average used most often in arriving at an appropriate survival rate for use in future estimates was a three-year weighted average which gave greater weight to the most recent years of experience.

Tables A-2 and A-3 provide a somewhat more refined idea of the procedure used to compute survival rates up to grade 6. While the procedure for each of the various subsections was exactly the same, Tables A-2 and A-3 illustrate the computation of survival rates for the city as a whole. For instance, .6305 in the Birth-to-Kindergarten (B-K) column of Table A-3 means that the number of kindergarten students in 1963 was approximately 63 per cent of the resident births recorded in 1958. Since birth data prior to 1958 were not available, only three years' experience could be used in the B-K survival rates. This represented no serious problem since primary reliance was placed on the three-year weighted averages in any event.

Because of the way that enrollment data are kept, survival rates for grade 7 and above could not be computed using elementary districts as the

TABLE A-4

3-Year Weighted Per Cent Survivals for Grades 7-12 in Pittsburgh

Section of City	*6-7*	*7-8*	*8-9*	*9-10*	*10-11*	*11-12*
North	.9867	.9744	1.2550	.8994	.8930	.8879
Central-East	.9984	.9680	1.2147	.9284	.9132	.8857
South	1.0261	1.0327	1.4638	.9681	.9128	.9249
Total	1.0035	.9864	1.2897	.9346	.9095	.8085

basic geographical unit. As a matter of fact, the smallest units available at this level were the three major sections of the city—North, Central-East, and South. Furthermore certain problems in using even this information were created by the fact that substantial numbers of students go outside their home school area to attend specialized vocational schools. Despite these problems, it was still possible to make meaningful estimates about 7-12 survival rates in certain broad groupings of elementary districts. These estimates were generally based upon the patterns of growth known to exist in these areas. Table A-4 provides the grades 7-12 survival rates for the city as a whole and for each of the three broad sections of the city. As one might expect, the survival rates for the South Side are slightly higher than those listed for the other sections of the city. This is, of course, a reflection of the fact that the section of Pittsburgh south of the Monongahela River has been the major growth area of the city over the last few years. Because most of the remaining land in Pittsburgh which is suitable for development is found on the South Side, this growth differential is likely to continue over the next few years. This assumption that the South Side will continue to grow faster (or lose school population at a slower rate) than other sections of the city lends support to the continued use of these differential survival rates throughout the estimating period.

With this understanding as to the calculation of past survival rates, it might be well to comment upon the need for, and the procedures used in, grouping districts to obtain a best estimate of future survival rates in the various elementary districts. For the most part, individual elementary districts were judged to be far too small for the purpose of placing reliance on any three-year average of survival rates. In certain cases, known or suspected changes in elementary district lines over the past three years make the individual district percentage survival rates quite misleading. Hence, it was decided that, whenever possible, elementary districts with similar housing and growth characteristics should be grouped together. The survival rates computed for these groups of elementary districts could then be used, with only slight modification, in each of their component districts as the basis of a future growth pattern. Examples of districts grouped together for the purpose of computing survival rates are Clayton-East Street-Fineview, Gladstone-Burgwin, and Schaeffer-Westwood-Oakwood-East Carnegie. In certain cases, such as Forbes, Arsenal, and Dilworth, the computation of survival rates was done on an individual district basis. The decision to use these districts individually was generally based upon knowledge of a major housing change in the district within the past three years or a markedly different pattern of nonpublic school enrollment within the district. Having arrived at a best estimate in each district as to the appropriate survival rates for the next few years, an account of possible alterations in survival trends was made on a district-by-district basis.

CONSIDERATION OF SPECIFIC ALTERATIONS IN SURVIVAL TRENDS The alterations of survival trends available in the projection methodology were of two types. First was the option of either raising or lowering the survival rates at the end of the first five years of the ten-year estimating period. Because of general uncertainty as to how present trends might change after 1970, this particular option was used rather sparingly and when used, the increment in survival rates was rather small. The difference between the "high" and "most probable" estimates used in the text of this report was based upon the combined use of such an increment factor in various districts and a set of slightly higher initial survival rates in selected areas of the city.

The second and most important alteration option in the projection model is the possibility of adding or subtracting a given number of students in any grade in any given year. This alteration is generally made only in cases where a housing development or a specific housing removal project is planned for the district in question. The following is a sample list of special alterations used in the estimates of this report:

EAST STREET —	84 students spread over grades K-12 were removed from the district in the early 1970's as a result of the new highway projected for the East Street valley.
DILWORTH —	305 students in grades K-12 were added (185 in 1969 and 120 in 1972) as a result of an anticipated 374 units of new housing in the East Liberty Urban Renewal Area and the Dilworth School District. This estimate is consistent with projections made by the Pittsburgh Department of City Planning and is based upon an assumed .8 public school students per housing unit.
FAIRYWOOD —	388 students in grades K-12 were added in 1968 as a result of 450 units of new housing projected for the area.

PATTERNS OF CHANGE IN RACIAL COMPOSITION The only remaining part of the projection methodology requiring further explanation is the procedure used in estimating racial composition of enrollments in the various sections of the city. Initially, a tentative rate of change in Negro percentage of public school enrollments over the next ten years was made on the basis of trends over the last few years in each of the elementary districts of the city. This tentative change was then qualified upward or downward in some districts by a judgment made on the basis of past or future changes in such districts. For example, a change in the housing quality in the area in the recent past or a change indicated by 1960 U. S. Census data concerning such characteristics as the percentages of white collar workers, of owner-occupied dwellings, and of foreign stock, would suggest that conditions associated with past trends had been altered. Or, such a change of conditions might be expected in the future, as in the case of a planned highway which would cause demolition of certain housing or a planned housing development which would provide additional residential units of a particular size and type. In some districts, the rate of change in the Negro percentage of school enrollment was judged to be higher or lower after 1970 than before by reason of such past or future changes. Also, in some districts alternative estimates based upon varied assumptions of rates of change in racial composition were used with the result that both "high" and "most probable" estimates are included in this report.

Once the anticipated rate (or rates) of change in Negro percentage of public school enrollments for a given district was determined, this rate was applied on a grade-by-grade basis to the Negro percentage of enrollment residing in the specific elementary district as determined by the special school census of December 1965. This provided racial percentages for each grade for each year during the period 1965-75. These racial percentages were then applied to the projected enrollments for the same period to obtain the estimated number of Negro and white students enrolled in the public schools during this ten-year period.

ESTIMATION MODEL APPLIED TO MORNINGSIDE ELEMENTARY DISTRICT

In examining the "most probable" estimate of secondary school enrollment in the Morningside Dis-

TABLE A-5

Resident Births in Morningside Elementary School District of Pittsburgh

Year	*Number of Births*
1958	112
1959	101
1960	94
1961	100
1962	76
1963	99
1964	76

trict, we begin with the resident births and current public school enrollments of Tables A-5 and A-6 respectively. By grouping Morningside with the neighboring districts of McCleary, Sunnyside, and Fulton, a set of percentage survival rates applicable to the entire area is calculated. These survival rates, which are shown in Table A-7, are judged to be applicable without change to the Morningside ~~District~~ for the entire estimation period. That is, special addition or subtraction of students, as a result of a sudden change in housing conditions, is deemed unnecessary. Hence, with the exception of an assumption regarding change in racial composition (to be considered later in the discussion), all elements required by the estimating methodology have been calculated.

The resident births through 1964 and the assumed future B-K survival rate of .7404 are then used to compute the estimated enrollments in kindergarten through the year 1969. This computation gives us the first column in the basic enrollment matrix of Table A-8. The known public school enrollments as of December 1965 constitute the top row of the table. The remaining entries are computed by multiplying across the diagonal by the appropriate survival rates of Table A-7.

Past trends in the Morningside District suggest that the Negro percentage of enrollments will grow approximately 1.0 per cent per year over the next ten years. This gradual increase means that, on a

TABLE A-6

Current Resident Public School Enrollment in Morningside Elementary District of Pittsburgh*

Grade in School	*White*	*Negro*	*Total*
K	79	4	83
1	38	3	41
2	32	4	36
3	24	4	28
4	29	4	33
5	29	5	34
6	34	6	40
7	27	2	29
8	23	5	28
9	50	4	54
10	42	4	46
11	31	1	32
12	45	0	45
Other**	4	0	4

* The enrollments of this Table include regular, special, and vocational students. Pittsburgh begins to identify special students after Grade 2. The total number of these students was available for each elementary school, but not on a grade-by-grade basis. Therefore, the number of special students in the Morningside district below grade 9 was distributed equally over Grades 3-8.

** This row includes prekindergarten students, postgraduate students, and students enrolled in special sight and hearing classes.

TABLE A-7

Percentage Survival Rates Used in Morningside Elementary District in Pittsburgh*

Grade Sequence	*Survival Rate*
B-K	.7404
K-1	.7083
1-2	.8850
2-3	.9831
3-4	.9893
4-5	.9946
5-6	.9745
6-7	.9984
7-8	.9680
8-9	1.2147
9-10	.9284
10-11	.9132
11-12	.8857

* These survival rates represent the 3-yr. weighted average for four elementary districts—McCleary, Fulton, Morningside, and Sunnyside.

TABLE A-8

Matrix for Estimating Enrollments in Morningside Elementary District in Pittsburgh*

School Year	*K*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*Total Grades 5-12*
1965-66	83	41	36	28	33	34	40	29	28	54	46	32	45	308
1966-67	74	59	36	36	27	32	33	40	28	33	50	42	28	286
1967-68	56	52	52	36	36	27	32	33	38	33	30	46	37	276
1968-69	73	40	46	52	36	35	27	32	32	46	31	28	41	272
1969-70	56	52	35	46	51	36	35	27	31	38	43	28	25	263
1970-71	56**	40	46	35	46	51	35	35	26	36	35	39	25	282
1971-72		40	35	46	35	46	50	35	33	30	34	32	34	294
1972-73			35	35	45	35	44	50	34	40	28	31	28	290
1973-74				35	35	45	34	44	48	40	37	26	27	301
1974-75					35	35	44	34	43	58	37	34	23	308
1975-76						35	34	44	33	51	53	34	30	314

* All entries have been rounded off to the nearest integer.

** As the relevant birth data for this group were not available at the time the projections were developed, this figure is based on an estimate of 1965 births.

grade-by-grade basis, the Negro percentage of enrollments would increase 5 per cent by 1970 and a further 5 per cent by 1975. This general pattern of change in the racial composition of Morningside's school population is reflected in Table A-9.

This estimating procedure was applied to each elementary district in the city; then the secondary school enrollment trends in various combinations of elementary districts were estimated. And thus the enrollment and racial composition estimates for the attendance districts recommended in this report were computed. The enrollment estimates for grades 5-8 and grades 9-12 are given in Table II-1 (see page 5); the more detailed estimates by individual elementary districts have been given to the Pittsburgh Public Schools.

TABLE A-9

Estimates of Secondary School Enrollment and Racial Composition in Morningside Elementary District in Pittsburgh*

School Year		*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*	*Total Grades 5-12*
1965-66	*White*	29	34	27	23	50	42	31	45	281
	Negro	5	6	2	5	4	4	1	0	27
	Total	34	40	29	28	54	46	32	45	308
1970-71	*White*	41	28	31	20	32	31	36	24	243
	Negro	10	7	4	6	4	4	3	1	39
	Total	51	35	35	26	36	35	39	25	282
1975-76	*White*	26	26	37	24	43	44	30	27	257
	Negro	9	8	7	9	8	9	4	3	57
	Total	35	34	44	33	51	53	34	30	314

* All figures presented in this table have been rounded off to the nearest integer.

Appendix B

Past trends in population and school enrollment

As shown in Table B-1, Pittsburgh had a population of 604,332 in 1960, a decline from the 1950 population of approximately 10 per cent. Population changes in various planning districts of Pittsburgh's City Planning Department are shown on Map B-1. The rate of population loss in the lower North Side (Planning District N 2), the Hays-Mifflin section of the South Side (Planning District S 4), and the Hill (Planning District C) was much greater than that for the city as a whole. On the other hand, only one of the thirteen areas, the lower South Side (Planning District S 3), showed a gain in population between 1950 and 1960.

Table B-2 shows the population of each planning district in 1950 and in 1960 and the percentage of change per district during the intervening decade. It reveals that the changes ranged from a population drop of 33.32 per cent in Planning District S 4 to an increase of 16.45 per cent in Planning District S 3. It also shows that two districts remained nearly constant over the period—Planning District W, in the extreme west end, with a decrease of only .15 per cent and Planning District E 2 in the extreme east end, with a decrease of only .03 per cent.

While the overall population change was downward, the school-age population increased be-

TABLE B-1

Population by Decades in Pittsburgh 1900-1960

Year	*Population*	*Percentage Change from Previous Census Year*
1900	321,616	——
1910	533,905	+66.01
1920	588,343	+10.20
1930	669,817	+13.85
1940	671,659	+ 0.28
1950	676,806	+ 0.77
1960	604,332	—10.71

Source: U.S. Census Reports

TABLE B-2

Population Growth 1950-1960 by City Planning Districts in Pittsburgh

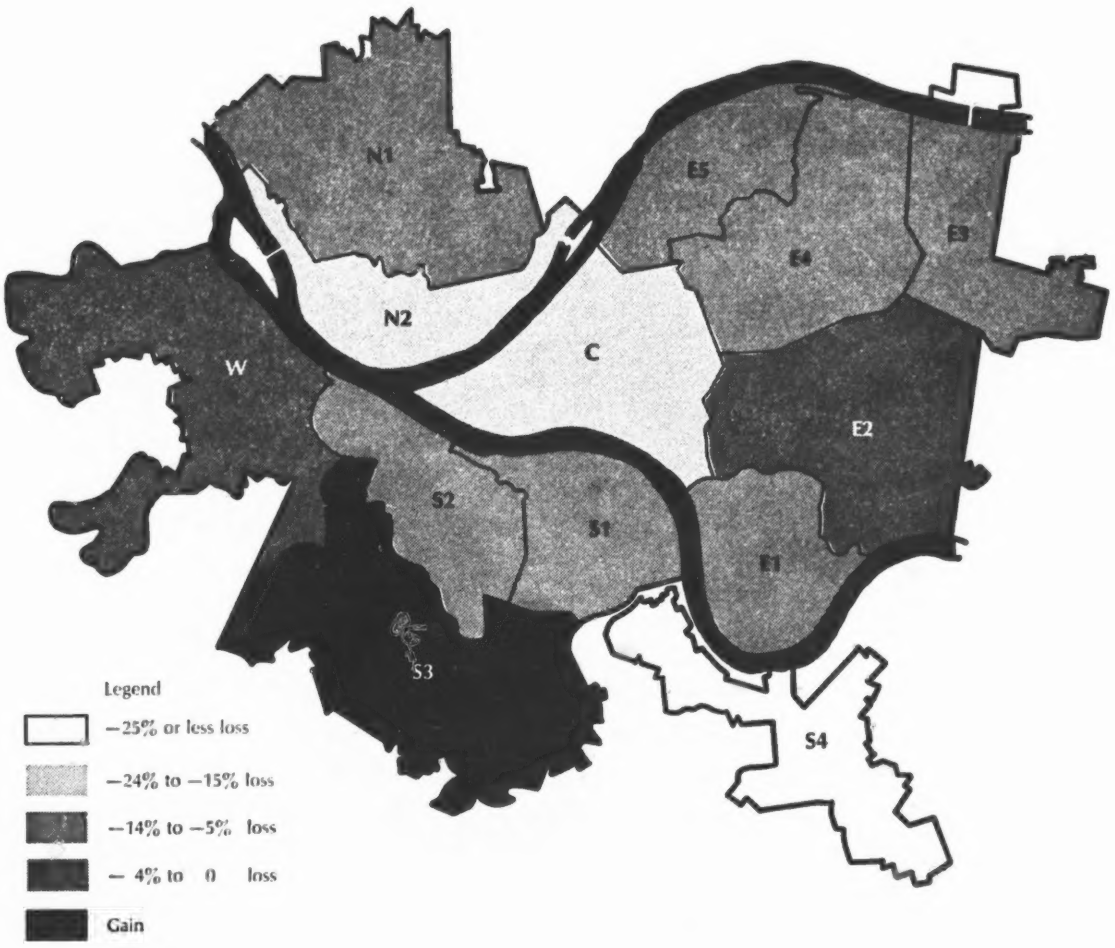
Planning District	*1950*	*1960*	*Percentage Change*
C	106,696	80,163	—24.87
E1	33,140	29,946	— 9.64
E2	47,316	47,301	— 0.03
E3	43,531	41,207	— 5.34
E4	97,231	83,996	—13.61
E5	32,247	28,705	—10.98
N1	62,640	56,920	— 9.13
N2	69,469	52,220	—24.83
S1	48,722*	42,291*	—13.20
S2	48,545	44,108	— 9.14
S3	52,018	60,575	+16.45
S4	12,140**	8,095**	—33.32
W	34,839	34,785	— 0.15
Total	688,534	610,312	—11.36

Source: Special Study by Pittsburgh Commission on Human Relations, April, 1961.

* Includes population of Mt. Oliver.

** Includes population of Census Tract 7 (not part of Pittsburgh in 1950, but incorporated in 1960).

MAP B-1 **Population Growth 1950-1960 by City Planning Districts in Pittsburgh***

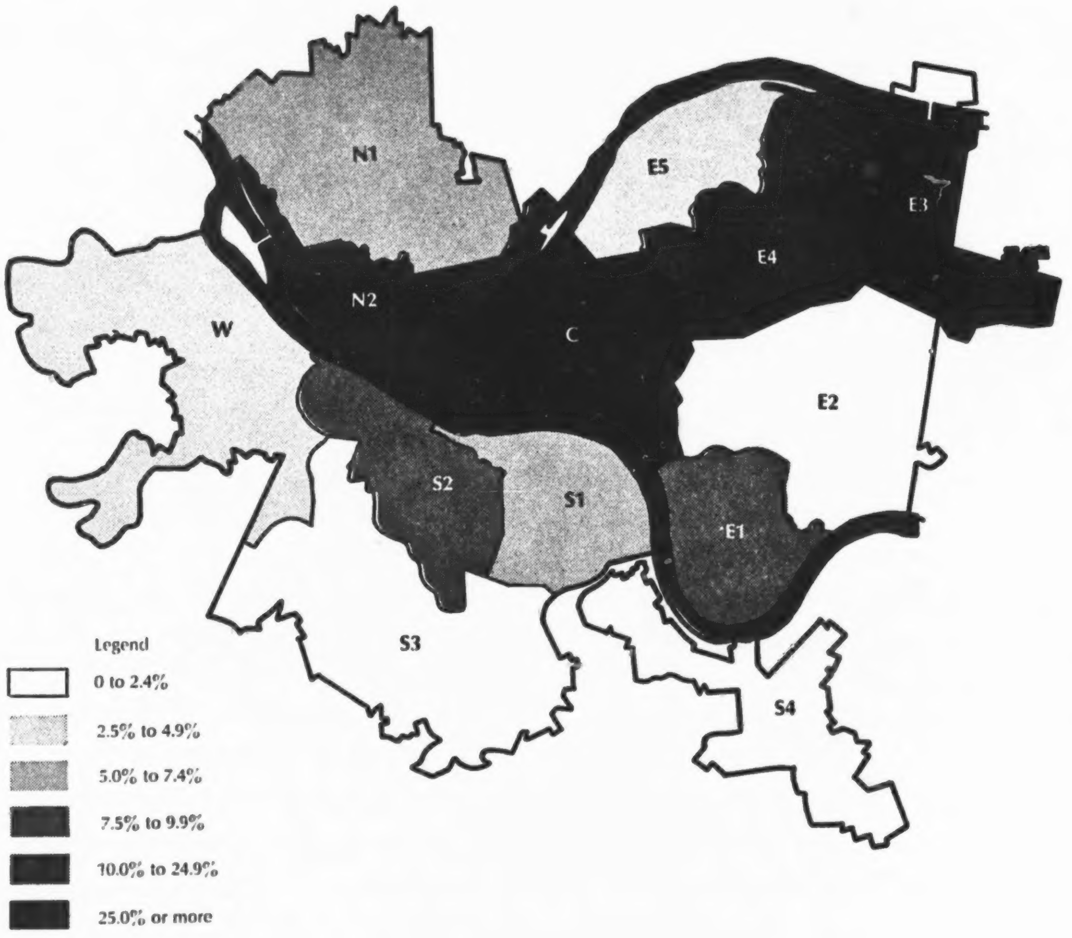


*Exact gains and losses are recorded in Table B-2.

tween 1950 and 1960. Chart B-1 shows changes in the composition of Pittsburgh's population between 1950 and 1960 by three age cohorts; under 20, 20-44, and over 44. During the period of school-age population growth, there was a proportionate loss in the middle age cohort (20-44) and a proportionate gain in the younger and older cohorts. Table B-3 gives the results of Chart B-1 broken down into smaller age groups. This table shows that the percentage of Pittsburgh's population represented by the 5-14 age group grew from 13.7 per cent to 16.7 per cent while the percentage of all other age groups under 45 grew only very slightly or decreased. The number of people in the 5-14 age group in Pittsburgh increased from about 94,300 in 1950 to about 101,900 in 1960, as can be readily seen by applying these percentages to the figures of Table B-2.

Since 1960, however, there has been a slight decline in school enrollments in Pittsburgh. Table B-4 shows the overall decline from 125,309 public and parochial school students in 1960 to 123,223 in 1965. This table shows also the change in the balance between public and parochial school enrollments. The percentage of parochial school students has declined steadily since 1960, from 41.4 per cent to 37.3 per cent in 1965. In absolute numbers, parochial school enrollments fell from 51,891 to 45,928 over the five-year period, while public school enrollments rose from 73,418 to

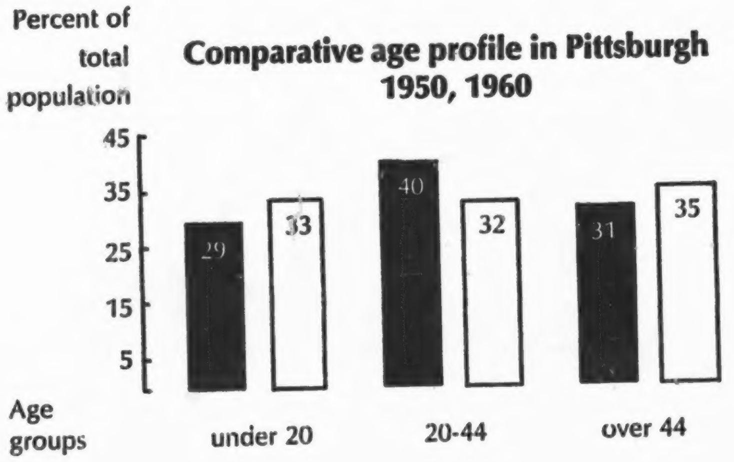
MAP B-2 Racial Distribution by City Planning Districts in Pittsburgh, 1960*



*Exact racial percentages are recorded in Table B-5.

CHART B-1

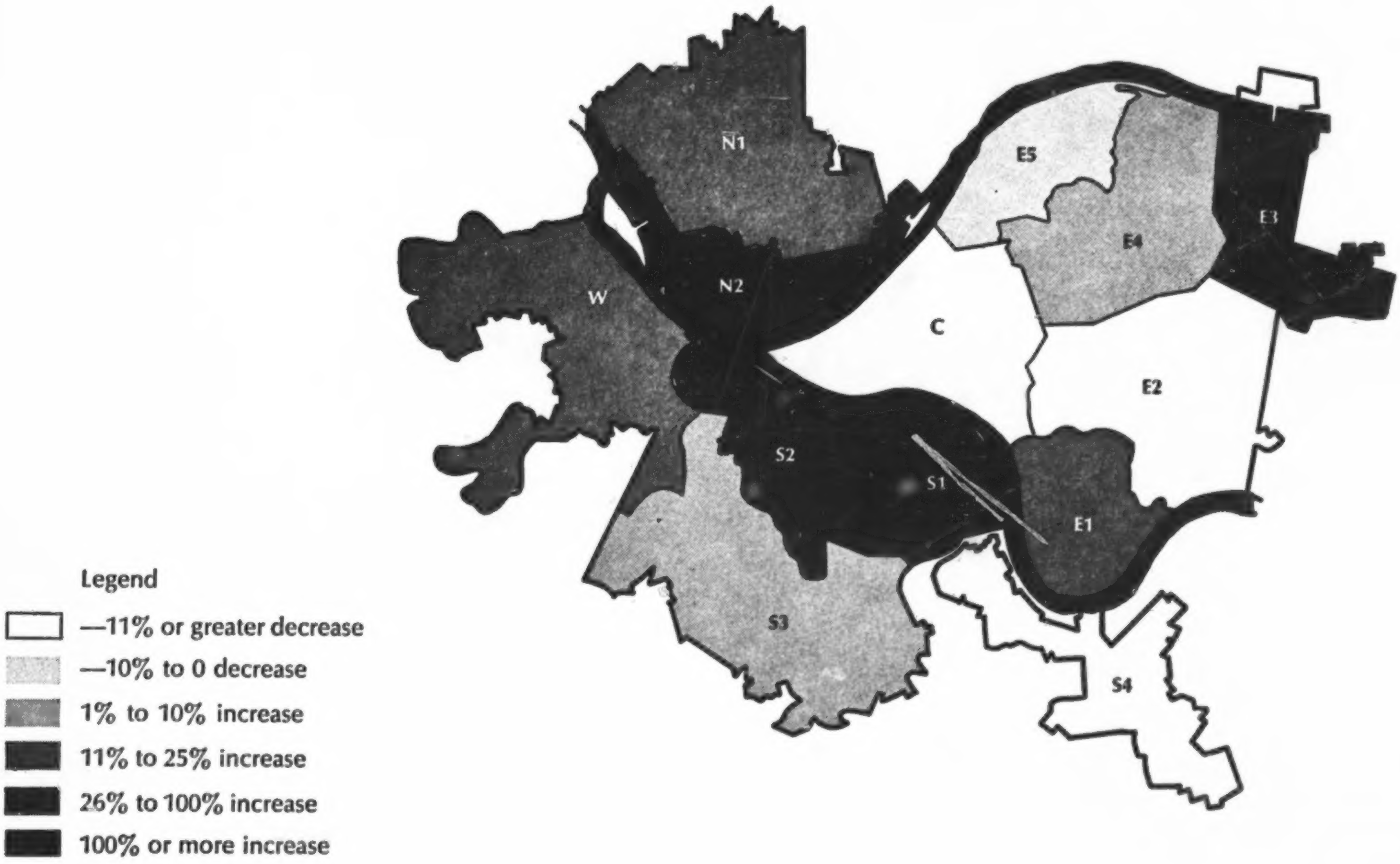
Comparative age profile in Pittsburgh 1950, 1960



77,295. Thus, the slower increase in public school population has not offset the more rapid loss in the parochial schools.

According to United States Census information, the nonwhite population of Pittsburgh increased from 82,981 in 1950 to 101,739 in 1960. As Maps B-2 and B-3 indicate, neither the present nonwhite population nor its increase over this ten-year period has been evenly distributed over the city. This uneven distribution is also shown in Tables B-5 and B-6 in greater detail. As Table B-5 demonstrates, two planning districts had populations which were more than 50 per cent nonwhite, C with 51.3 per cent and E 3 with 60.5 per cent. Except for these two districts, and N 2 with 20.3 per

MAP B-3 **Pecentage Change in Nonwhite Population by City Planning Districts in Pittsburgh***


N1
N2
W
E5
E4
E3
C
E2
S2
S1
E1
S3
S4
Legend
—11% or greater decrease
—10% to 0 decrease
1% to 10% increase
11% to 25% increase
26% to 100% increase
100% or more increase

*Exact gains and losses are recorded in Table B-6.

cent and E 4 with 13.6 per cent, all the other planning districts were less than 9 per cent nonwhite. This residential isolation of the nonwhite population repeats the pattern found in other urban areas of the United States.[1]

The pattern of racial composition of public school enrollments is similar to that of Pittsburgh as a whole. Map B-4 and Table B-7 show that the concentration of the Negro public school population in certain school districts is somewhat more

TABLE B-3

Comparison of Age Distribution in Pittsburgh 1940, 1950, 1960 (expressed as the percentage of the total population)

Age Group	*1940*	*1950*	*1960*
Under 5	6.6	9.2	9.6
5-14	15.2	13.7	16.7
15-19	9.2	6.4	6.9
20-24	9.5	8.3	6.2
25-44	32.0	31.6	25.6
45-64	21.3	22.5	23.8
65 and over	6.2	8.3	11.2

Source: U.S. Census Reports

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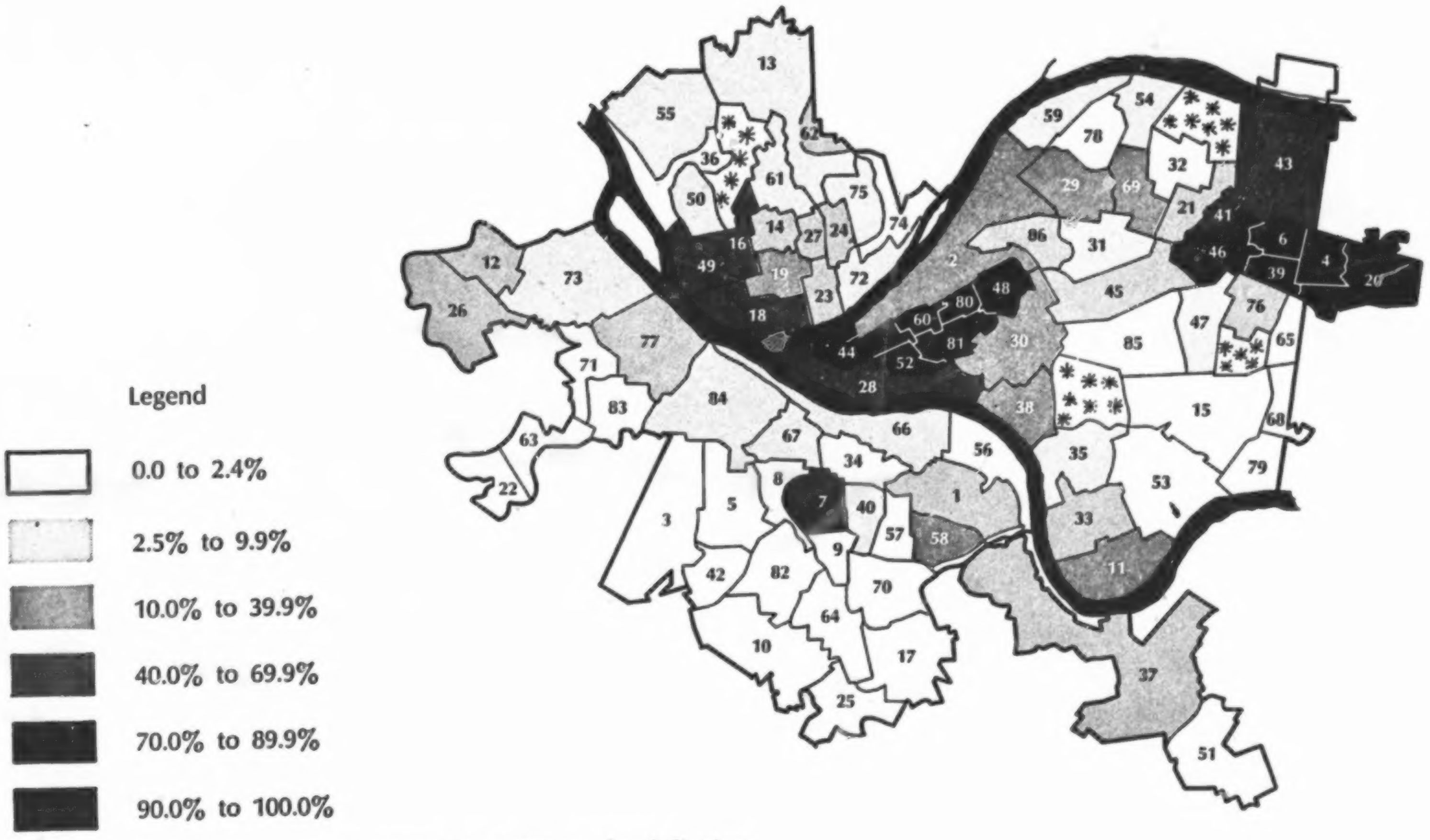
[1] Wilson Record, "Minority Groups and Intergroup Relations in San Francisco Bay Area" (Institute of Governmental Studies, University of California, Berkeley, California), pp. 9-12; and Karl E. Taeuber, "Residential Segregation," *Scientific American*, August, 1965, pp. 12-19.

MAP B-4 Negro Percentage of Enrollments (all grades) in Elementary School Districts*


Legend
☐ 0.0 to 2.4%
2.5% to 9.9%
10.0% to 39.9%
40.0% to 69.9%
70.0% to 89.9%
90.0% to 100.0%
13
55
62
36
61
50
75
14
27
24
74
16
49
19
23
72
18
12
73
26
77
71
83
84
63
22
67
66
8
7
34
40
56
1
3
5
9
57
58
42
82
70
64
10
17
25
59
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78
32
43
29
69
21
41
86
31
2
48
80
60
81
30
52
44
28
38
45
46
6
4
39
20
47
76
65
85
15
68
35
79
53
33
11
37
51

* Parks and cemeteries not within existing school districts.

*Based upon special school census conducted by Harvard staff in December, 1965. The numerical label in each district corresponds to the district as identified in Table B-7. Exact Negro percentages are recorded in Table B-7.

intense, however, than that found in any planning district. For example, compared to the 60.5 per cent in the planning district of highest concentration, eighteen elementary school districts have concentrations of nonwhite public school children amounting to more than 70 per cent, including eleven with more than 90 per cent. This disparity is evidently largely because nonpublic school students, generally white, are not included in the public school population shown on the map and the table and partly because of the more precise location of population in the elementary school districts, which are smaller geographic units.

TABLE B-4

Public and Parochial School Enrollments in Pittsburgh, 1960-1965

Year	*Public*	*Parochial*	*Total*	*Parochial Enrollment Percentage*
1960	73,418	51,891	125,309	41.4
1961	74,385	50,925	125,310	40.6
1962	76,094	50,001	126,095	39.7
1963	77,531	48,874	126,405	38.7
1964	77,442	47,538	124,980	38.0
1965	77,295	45,928	123,223	37.3

Source: Public School Enrollments from Office of Statistics, Pittsburgh Public Schools; Parochial School Enrollments supplied by Diocese of Pittsburgh School Department.

TABLE B-5

Racial Distribution by City Planning Districts in Pittsburgh, 1960

Planning District	*White*	*Nonwhite*	*Total*	*Percentage Nonwhite*
C	39,046	41,117	80,163	51.3
E1	27,329	2,617	29,946	8.7
E2	46,677	624	47,301	1.3
E3	16,275	24,932	41,207	60.5
E4	73,957	10,039	83,996	13.6
E5	27,976	729	28,705	2.5
N1	53,937	2,983	56,920	5.2
N2	41,627	10,593	52,220	20.3
S1	33,651	2,660	36,311	7.3
S2	40,497	3,611	44,108	8.2
S3	60,392	183	60,575	0.03
S4	7,874	221	8,095	0.3
W	33,355	1,430	34,785	4.1
Total	502,593	101,739	604,332	16.8

Source: Special Study by Pittsburgh Commission on Human Relations, April, 1961.

TABLE B-6

Percentage Change in Nonwhite Population by City Planning Districts in Pittsburgh

Planning District	*Nonwhite Population*		*Percentage Change in Nonwhite Population*
	1950	*1960*	
C	46,982	41,117	−12.5
E1	2,171	2,617	+20.5
E2	724	624	−13.8
E3	9,724	24,932	+156.4
E4	9,440	10,039	+6.3
E5	793	729	−8.1
N1	2,407	2,983	+23.9
N2	5,612	10,593	+88.8
S1	1,089	2,660	+144.3
S2	2,338	3,611	+54.4
S3	180	183	+1.7
S4	268	221	−17.5
W	1,253	1,430	+14.1
Total	82,981	101,739	+22.6

Source: Special Study by Pittsburgh Commission on Human Relations, April, 1961.

TABLE B-7

Negro Percentage of Enrollments (all grades) in Elementary School Districts*

	Elementary District	*Negro Percentage*			
1	Arlington	20.0	44	Letsche	98.8
2	Arsenal	42.2	45	Liberty	21.7
3	Banksville	0.8	46	Lincoln	93.8
4	Baxter	98.9	47	Linden	5.6
5	Beechwood	2.4	48	Madison	97.3
6	Belmar	98.6	49	Manchester	88.3
7	Beltzhoover	87.8	50	Mann	5.5
8	Boggs Avenue	0.0	51	Mifflin	0.0
9	Bon Air	1.3	52	Miller	99.0
10	Brookline-Carmalt	0.1	53	Minadeo	0.2
11	Burgwin	52.4	54	Morningside	8.7
12	Chartiers	39.9	55	Morrow	4.9
13	Chatham	3.9	56	Morse	8.7
14	Clayton	16.0	57	Mount Oliver	0.2
15	Colfax-Davis	0.8	58	Murray	53.6
16	Columbus	77.6	59	McCleary	2.7
17	Concord	0.1	60	McKelvy	99.7
18	Conroy	73.1	61	McNaugher	9.6
19	Cowley	65.7	62	Northview Heights	35.6
20	Crescent	93.2	63	Oakwood	1.0
21	Dilworth	19.9	64	Overbrook	2.0
22	East Carnegie	0.0	65	Park Place	0.0
23	East Park	10.1	66	Phillips	9.9
24	East Street	12.2	67	Prospect	5.8
25	Fairview	0.9	68	Regent Square	0.6
26	Fairywood	27.2	69	Rogers	43.3
27	Fineview	20.8	70	Roosevelt	0.0
28	Forbes	72.5	71	Schaeffer	0.0
29	Fort Pitt	48.4	72	Schiller	2.7
30	Frick	60.0	73	Sheraden	3.6
31	Friendship	7.4	74	Spring Garden	0.5
32	Fulton	1.1	75	Spring Hill	6.2
33	Gladstone	38.2	76	Sterrett	10.7
34	Grandview	1.1	77	Stevens	20.4
35	Greenfield	4.6	78	Sunnyside	1.8
36	Halls Grove	2.4	79	Swisshelm	0.0
37	Hays	19.0	80	Vann	99.7
38	Holmes	42.9	81	Weil	98.6
39	Homewood	98.2	82	West Liberty	0.0
40	Knoxville	3.8	83	Westwood	0.6
41	Larimer	87.8	84	Whittier	3.0
42	Lee	0.0	85	Wightman	0.6
43	Lemington	86.6	86	Woolslair	10.4

Source: Special School Census, December, 1965.

*** This table represents the Negro per cent of public school enrollment, at all grade levels, residing within the geographic areas of the elementary school districts. The table does not indicate the actual enrollments of elementary schools.**

TABLE B-8

Negro Enrollments in Public Schools in Pittsburgh, 1960-66*

Year	*Total Enrollments*	*Negro Enrollments*	*Percentage of Negro Enrollments*
1960	70,178	23,122	32.9
1961	70,842	24,040	33.9
1962	71,989	25,080	34.8
1963	73,903	26,081	35.3
1964	75,141	26,983	35.9
1965	76,009	27,627	36.3
1966	75,904	28,120	37.0

Source: Office of Statistics, Pittsburgh Public Schools.

* The figures are based on live enrollment during the Spring of the years indicated according to Pittsburgh's annual public school racial census.

Nevertheless, as evidenced in Table B-8, the Negro percentage of the public school enrollments has increased since 1960 by less than 1 per cent per year. According to these data, which were taken from Pittsburgh's annual school racial census, this increase in percentage was largest between 1960 and 1961 and the smallest increases of .5, .6, .4, and .7 per cent have been in the most recent years.

Appendix C

Buildings not recommended for continued use as secondary schools

Even though there is a considerable amount of overcrowding in Pittsburgh's public schools at the present time, the construction of nearly 34,000 additional secondary spaces will make possible the discontinuation of many buildings now being used as secondary schools. Because the present study included an evaluation of secondary buildings only, it has not been possible to compare the condition of these buildings with that of the remaining elementary buildings. Therefore, it is not possible to recommend without qualification that certain buildings be abandoned for school use. In some cases, the buildings not recommended for continued secondary use might be in superior condition, or otherwise preferable for elementary use to certain of the present elementary buildings. Similarly, alternative uses of the discontinued secondary buildings for other school or nonschool purposes will depend on a close assessment and comparison of other potentially available buildings.

In certain cases, the school buildings and land listed below could be included in an urban renewal area and, through the available two-thirds federal support of renewal projects, sold to the Urban Renewal Agency at considerable advantage to Pittsburgh. It is expected that some of the buildings listed here, whether or not in a renewal area, will be abandoned and razed. Pittsburgh has several lovely parks, but it would be benefited greatly by additional open land or parks in various parts of the city.

CONNELLEY VOCATIONAL SCHOOL: This building, built in 1930, should continue to be a valuable educational resource for some time. It has potential to provide highly specialized programs, and its size and location suggest that it be considered for programs beyond the twelfth grade as either a part of the public schools, the community college program, or both. Most classrooms in the building should not be used by more than twenty students, and the organization of its shops should be improved.

CONROY SCHOOL: Originally built in 1886 and added to in 1908, this building has outlived its use as a secondary school. It is located on a very limited site. Exterior masonry needs repointing, stonework is spauling, and the window frames are in poor condition. Many classrooms have wooden floors and poor lighting. Acoustical control is poor. It is now being used as both a secondary and elementary school. Because of its inferior condition and location, it should be discontinued as a secondary school and should be replaced as an elementary school at the earliest opportunity.

FIFTH AVENUE SCHOOL: Originally built in 1894 and added to in 1926, this building has outlived its use as a secondary school. It is located on a limited site and the building would be difficult to adapt to new programs. Acoustical control is poor. Some flooring is in poor condition. Many specialized facilities are inadequate.

GREENFIELD SCHOOL: This school was built in 1922. There are cracks in the exterior brick work and window frames are in need of repair. Classroom floors are wooden and acoustical control is poor. Special facilities are inadequate for secondary school purposes. The building is now being used as both a secondary and elementary school. Its continued use as an elementary school should be possible for a number of years so long as circumstances require. If, after reorganization of elementary school districts, this building is not needed, it should be disposed of.

HERRON HILL SCHOOL: Built in 1927, this building is located on a hill high above the street it faces. While the building is generally in sound condition, acoustical control is poor. The building is overheated and poorly ventilated. With the construction of the Education Centers, not all existing secondary schools will be needed for middle schools. Schenley High School can provide more resources for education than Herron Hill and therefore is recommended as a middle school to serve this area of the city. The central location of Herron Hill and its generally sound condition suggest that it be considered for use as the proposed city-wide reading clinic.

LATIMER SCHOOL: Built in 1901, this building has outlived its use as a secondary school. The site is very limited with no outdoor play area. Window frames are in poor condition. The interior of the building is in poor condition. There are worn stairways, poor wooden floors, inadequate lighting, poor acoustical control, and unsatisfactory control of heating and ventilation. This building should be abandoned for school use.

MIFFLIN SCHOOL: Originally built in 1932 and added to recently, this building represents an asset to the public school system. Its location and limited specialized facilities suggest that it is more appropriate to use it as an elementary school rather than as a middle school.

MOUNT OLIVER SCHOOL: Originally built in 1898 and added to in 1914, this building has outlived its use as a secondary school. It has limited capacity (480) and little provision for the specialized facilities that a secondary program requires. Expansion would be very difficult.

SOUTH HILLS SCHOOL: This building was constructed in 1916 and added to in 1926. It is a large facility on a steeply sloping limited site. Acoustical control is very poor. Many classrooms have wooden floors. Window frames are in poor condition. Gymnasiums are undersize. This building is now fifty years old and because of its limited site and the expense of renovating should be discontinued as a secondary school facility when the new Education Centers are completed. Prospect Junior High School, located in the same recommended middle school area, has adequate capacity and superior facilities for the recommended middle school enrollments in the district.

WASHINGTON VOCATIONAL SCHOOL: Parts of this building were constructed in 1868. It was added to in 1909 and again in 1930. It has outlived its usefulness as a secondary school. There is no room for expansion. It has very limited capacity (585). Many rooms have wooden floors, acoustical control is poor, ventilation is very inadequate, and lighting is poor.

WESTINGHOUSE SCHOOL: Originally built in 1922 and added to in 1932 and 1966, this building has many deficiencies. Water has penetrated the roof and caused damage. Some exterior brick work is in need of pointing, window frames are in poor condition. Terrazzo floors in some corridors are badly cracked and hazardous. Many classrooms have wooden floors, which are in poor condition. Much of the lighting is inadequate and acoustical control is very poor. The heating and ventilation control is poor. In view of the fact that this building is already forty-four years old and that it would cost a great deal to renovate it, it should be discontinued as a secondary school.